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TRANSACTIONS

OF THE

North Carolina State Dental Association,

AT THE

TWENTY-SIXTH ANNUAL SESSION.

HELD AT

GREENSBORO, N. C.,

COMMENCING MAY 9TH, 1900.

PUBLISHING COMMITTEE

J. M. FLEMING. E. K. WRIGHT. J. M PARKER

RALEIGH, N. C.:
ALFORD, BYNUM & CHRISTOPHERS, PRINTERS,
1900.

PROCEEDINGS.

GREENSBORO, N. C., May 9, 1900.

The Twenty-sixth Annual Meeting of the North Carolina State Dental Association was called to order in Greensboro, N. C., May 9th, 1900, at 11 o'clock by the President, Dr. E. J. Tucker.

The meeting was opened with prayer by Dr. H. D. Harper.

The roll was called by the Secretary and the following found present:

Drs. Alexander, Ayer, Banner, J. E.; Benton, Betts, Bland, C. A.; Boyette, C. S.; Carroll, Conrad, Cole, Davis, I. H.; Everitt, Edwards, Fleming, Frazier, A. E.; Gorman, Hall, Harper, Harris, Hilliard, Horton, H. V.; Horton, P. E.; Hunter, T. M.; James, Jeter, Jones, Keerans, Little, McCracken, F. W.; McCracken, J. T.; Matthews, Morrow, Osborne, J. C.; Osborne, J. R.; Parker, Patterson, Pitts, Ramsey, W. B.; Ritey, Rominger, Smithwick, Snell, Spurgeon, Tucker, Turner, V. E.; Whitsett, Wright, Wyche.

The minutes of the last meeting were read and approved.

Dr. Everitt, Chairman of the Executive Committee, stated that on account of ill health Dr. Liverman had resigned as President of the Association, and that the First Vice-President, Dr. E. J. Tucker, had been appointed in his stead.

On motion, the action of the committee was unanimously endorsed.

The following resolution was unanimously carried:

"We, The North Carolina State Dental Association, desire to ex-

press our sympathy to Dr. A. C. Liverman in his sickness, and to express our regrets at his resignation as President of the Association, and at his absence at this meeting."

Dr. E. K. Wright being called to the chair, the President delivered his address as follows:

PRESIDENT'S ADDRESS.

Gentlemen of the North Carolina Dental Association:

The circumstances under which I have been called to preside over this honorable and scientific body, fills me with a profound sense of responsibility, but with nothing like shirking apprehensions. I assume the duties assigned me in obedience to the expression of your will, answerable only for a diligent, faithful and fearless exercise of the best powers within me. I express the gratitude, I hope, of an honest heart, for the confidence reposed in me. But a true realization of this fact only adds weight to my obligations. The short time for preparation fills me with grave fears for the right performance of my duties. In my weakness sustain me by your strength.

My Fellows, I greet you with that fraternal spirit of love which should and does characterize professional inspiration. I am truly glad to see so many of the profession here. I am made to feel and realize more each year this wonderful privilege of assembling ourselves together for counsel, and though we may appear divided on questions, we are not. We seek the good of mankind, therefore we are in accord. With the close of this session another year's history of our work is written in the records of our Association. Have we made progress? We shall see when we have made known our discoveries, inventions, failures and successes in practice.

This is where we show for what we labor—fall in love with our work, whatever may be its character, and we shall succeed. The pride we take in our work is the stimulus to endurance in this world of anguish and toil. It is said that "back of this pride we recognize human vanity that delights in its own cunning and skill, rejoices in its own attainments, is puffed up with a conciousness of its own knowledge and power." And while this is true, we say it is not objectionable, for, under divine guidance, this is the stimulus to creative activity, tending upward in growth and strength, that makes perfection possible. With this thought in mind, we shall press forward to the goal which will make us eminently practical and successful.

Without criticism, I will offer a few suggestions for the benefit, I hope, of the Association:

One suggestion as to the discussion of papers. We often have papers, prepared with much care, read before this Association and passed without discussion. It often occurs that no one prepares a paper but

the chairman of the committee, and he does not like to discuss the merits of his own paper, and no one opens the discussion—so it is passed. This should not be. We should have a full discussion of every section on the program; and to do this, I suggest that the chairman of each committee appoint one man on his committee to open the discussion with a five or ten minutes talk on the paper presented, or the subject, if there is no paper. In this way no subject would be passed without discussion. I should like to see more papers by the members of the Association. When we join the Association, we virtually promise to make it a matter of conscience to take part in the meetings, and to do what we can for the betterment and interest of the Association, and we should not shirk, but do our duty along this line.

Another suggestion is, that matters of business go before the Executive Committee and be eliminated from the sessions of the main body, except for ratification or rejection. So much valuable time of the Association is taken in discussing matters that might be settled by this committee.

Now, here is a matter I regret very much to bring to your notice. There is a wave of unprofessionalism among the profession in many sections of the State. This is confined to towns and "cities" to a large extent and is to be very much deplored. I cannot call to mind anything more demoralizing and contrary to the teachings and purpose of our profession than this. I earnestly hope that if there are any members of this Association (which I hope is not the case) given to this departure from true professional ethics, that they will turn to our Code of Ethics and read Article II, Sections 1, 2, 3, 4 and 5, study these sections carefully, imbibe them, make them a part of their lives, and never again be guilty of unprofessional conduct. No man can build up a practice and hold it by cutting prices, speaking disparagingly of his fellow practitioners, making big display, advertising, etc. Empiricism must be left out of our profession—it is too noble for such. It is with the kindest feeling and for the benefit of the profession that I speak of this. We cannot afford to be guilty of such conduct. We have more regard for the Fraternity to which we belong. For it is divine and noble in conception, grand and beneficent in purpose, glorious, wonderful and rich in achievements, and we should love and honor it.

I cannot and will not attempt to discuss dentistry as an ancient science and art. The fact is, that nothing of value comes to us from antiquity—so as an art it is modern, and wholly modern as a science. It has been re-created—had a new birth as a profession, and now stands on a triune foundation, sure and certain,

THE COLLEGE, THE JOURNAL, AND THE SOCIETY.

In its growth as a profession, we see these three great elements in its true new birth attending its development and wonderful progress

in every branch. Rob it of these sources of life and the honest practitioner becomes homeless, his life is shut against the high and holy sentiments like patriotism and kindness of heart to mankind. We should cultivate a love for our Association—it is a means of inspiration and education where thoughts and approved methods are presented, where the highest standard of professional moral ethics are held aloft to the young and inexperienced practitioner, enjoining love and a desire for right living. So if we carry out the true spirit of professionalism taught in our meetings, slanders, jealousies and envy will pass away as the mist before the bright summer's sun.

Our Association must grow in numbers. The new graduates will join us and we will welcome them, not looking on them as rivals, but as brothers and co-workers, giving to us and we to them some message for the benefit of humanity. In this lies the future of our profession.

Direct the enthusiasm and energy of the young into channels profitable to all. Let us delight in the true spirit of professionalism, that which ennobles, dignifies and honors.

Character and culture make the true professional man. No class of men realize more fully than the dental surgeon that the large things are made up of the small ones, and without looking well to the small things our great operations would become ultimate failures. In these meetings we gather the rich experience of our associates. The man who isolates himself from the profession will stop growing and lead a purposeless, selfish life. To make ourselves pleasant and useful is to make our lives beneficent and interesting. This embraces man's whole duty and existence. Success means that we do our best every time. There can be no substitute for sincerity and earnestness in dental practice. This divine spark, when kindled into a flame by perseverance and zeal, will cause us to realize the pleasure and profit there is in our calling. Though our ability be great or small, few of us, if any, have lived up to the knowledge we possess. So we need the stimulating influence of one another to bring out this latent power. The dental surgeon should be gentle, refined, considerate, and withal cleanly.

The dental office of to-day must be well kept, neatly furnished, clean and contain a good library. Dentistry is a science, and the dental surgeon must be a scientific man.

The horizon of scientific attainments has been lifted and extended until only a powerful glass can trace its outlines. The modern dental surgeon has become learned, accomplished and skilled until he who would command the confidence of his brethren and the public must have more than a general knowledge of the department in which he is engaged. So, then, dentistry does not only mean that we know how to extract, make and fill teeth, but it means more than that. It means that we must be skilled in all that pertains to our profession, and beneficent in that which pertains to mankind. We

must be scientists, inventors and discoverers. Why not! Cannot the dental surgeon lay claim to as great discoveries as the world enjoys? Think of the wonderful discoveries of Drs. Wells and Morton. What discovery or invention is comparable to this by which the knife of the surgeon is steeped in the waters of forgetfulness and the deepest furrow in the knotted brow of agony is forever smoothed away. Anaesthesia by ether and nitrous oxide gas was given to humanity by the dental profession. The invention of the surgical engine can be justly claimed by that prince of dental surgeons, Dr. Bonwill. By the use of the engine much of surgery becomes simplified and almost painless. These discoveries and inventions of the past, how wonderful!

Is it not pardonable, then, to dream of the grand possibilities of the future? We want painless dentistry, may we not confidently hope for it? It is calculated that the conductivity of impressions to the brain is about eighteen thousand inches per second, and if we can get something that will cut faster, will we not have painless dentistry? We now have a surgical engine that drives the instrument to about eighteen thousand revolutions per minute. Can it not be perfected? And who can say that the dental surgeon will not invent apparatus for separating water into its two gases and furnishing fuel for his office in a cheap and cleanly manner? Yes, even more, by this means some day furnish fuel for the large cities. Call me a dreamer if you will, I do not object. With pride I think on the progress in every line of our profession, especially in porcelain inlay work. May we not hope soon for a plastic filling material that will be durable and approach in perfection the natural organs of mastication! Surely we may, if the wonderful progress in our calling during the closing years of the century is as marvelous as it has been great. I venture the prophecy that the achievements of the past are small, compared with what the future will be.

Then may we be inspired to labor steadfastly and unceasingly to improve the opportunities of the present and reach the highest ideal of professional development. With divine inspiration work,

> "Dare to be honest, dare to be true,
> For you have a work no other can do,
> Do it so nobly, so bravely, so well,
> Men and angels will hasten the story to tell."

E. J. TUCKER.

A committee of three, composed of Drs. Harper, Everitt and Horton, was appointed to consider the President's address.

Dr. W. W. Rowe was reinstated to membership by a unanimous vote after paying the fee as required by law.

The following applicants for membership were received and at a later meeting were duly elected:

Drs. Jno. D. Biggs, J. A. Sinclair, E. A. Perry, J. D. Reagan, C. W. Reagan, E. E. Richardson, C. D. Sadler, L. G. Reid, J. G. Reid, J. H. Wheeler, J. C. Watkins, J. M. Jacobs, J. H. Judd, L. L. Dameron.

Dr. C. W. Banner having withdrawn from actual membership in the Association and entered the Medical branch, Dr. H. V. Horton of Winston, was appointed in his stead as a member of the Executive Committee.

On motion, Dr. Banner was made an honorary member of the Association.

The report of the Treasurer, Dr. James, was read as follows :

TREASURER'S REPORT.

Amount on hand at last report	$ 207 49	
Received for dues	135 00	
Initiations and reinstatements	36 00	
DISBURSEMENTS.		
Paid Dr. I. N. Carr, on publishing committee		$ 25 00
Paid Dr. J. S. Spurgeon, salary and postage, etc.		68 13
Paid Dr. J. M. Ayer, for Janitor		10 00
Paid Miss Clyde Ellington, stenographer		30 00
Paid S. S. White, Dental Mfg. Co., for material		4 04
Paid Dr. V. E. Turner, telegraphing		1 00
Paid E. M. Uzzell, Publisher		57 51
Paid Dr. J. Martin Fleming Publishing Committee		25 00
Paid Dr. F. S. Harris, prosecuting case of malpractice		10 00
Paid Treasurer's salary		25 00
Total	$378 49	$255 68
Disbursements	255 68	
Balance on hand	$122 81	

D. L. JAMES, *Treasurer.*

The report was referred to the Auditing Committee composed of Drs. Wright, Horton and Snell, who later reported the accounts as correct and the books and bond in good order.

Dr. Wyche tendered the courtesies of the Manufacturers' Club to the Association while in Greensboro, and also announced that the Normal and Industrial College would give an entertainment on Thursday evening complimentary to the Association.

The Association then adjourned to meet at the Court House at 3 o'clock, P. M.

FIRST DAY—AFTERNOON SESSION.

Pursuant to adjournment, the Association was called to order by the President at 3 o'clock, P. M.

Report of the Publishing Committee was read by Dr. J. M. Fleming, Chairman, as follows:

REPORT OF THE PUBLISHING COMMITTEE.

The Publishing Committee wishes to report that they carefully edited the proceedings of the last meeting and had printed 150 copies, giving the contract for the printing to the lowest bidder.

The work speaks for itself. Whatever of failure you find in it is due to the carelessness of the chairman of the committee; whatever of success, to the full and complete report of the stenographer.

Respectfully submitted,

J. M. FLEMING, *Chairman.*

Dr. Wyche introduced Prof. T. A. Smoot, of the Faculty of the Greensboro Female College, who delivered the Address of Welcome, as follows:

Mr President and Gentlemen, Members of the Dental Association of North Carolina:

It is a great pleasure as well as an honor to me to be selected to offer to you a word of greeting and welcome to the City of Greensboro. Many might be selected who could do it more eloquently than I, but

I think no citizen of Greensboro could accord you a more hearty welcome. I welcome you, sir, and the Association, to Greensboro on account of what you are. If I were called upon to give an address of welcome to an association of brewers or an association of prize-fighters, I think I could not do it very gracefully, even were I to consent to do it at all, because the reflection would come up constantly that I was welcoming a class of men who were contributing nothing good to the community; but when I accord you a welcome to Greensboro I do it, knowing that you are a potent factor to the civilization of North Carolina; knowing that your profession has stood high before the people, having in it men of very high character and integrity. And while I would not hesitate to go to a town where there was not a member of a Brewer's Association or Prize-fight Association, I hope it will never be my lot to locate in a town where there is not a member of your profession, because I think the dentist has become a *sine qua non* of comfort. I welcome you, sirs, because of what you have done. You have a bright record as a profession. I claim to know little about the history of dentistry, but from the little I do know, I am aware that there is no profession that has made a more rapid advancement than yours, and among the marks of our higher civilization is that which has been made by your profession in its advancement. I remember hearing Dr. Smith, of Tulane University, make the greatest literary address I ever heard. It was on Greek Civilization, and in that address he compared the civilization of Greece with the civilization of to-day, and he told us that the average Greek was as far above the American citizen or Anglo-Saxon as the average American white man is above the negro. I am frank to admit that the Greek civilization was far above ours in some respects, yet, give me the nineteenth century. Suppose we could roll back the walls of time twenty-five hundred years and find ourselves in the Athens of old, with its shining gold-crowned towers, with its paintings, its Accropolis and its unparalleled Parthenon.

One standing under the Parthenon would be lost in admiration of its wonderful statuary and the famous paintings of Appelles, and he would see that the art and statuary of Greece are far beyond that of the nineteenth century; but I imagine if the tooth-ache were to strike him about that time he would cry, "roll me on to the nineteenth century, to the dentist who could extract that tooth." If I were called upon to welcome antiquarians I could not do it with very good grace. I have heard people say "give me the good old times, the good old times." I could not welcome people of that kind. I welcome the men whose watchword is "progress." I welcome you, sirs, because you are a progressive Association; I welcome you because of what you have done and of what you are and of what you are going to be; and on the part of every citizen of Greensboro, on the part of the teaching profession of Greensboro, I bespeak for

you words of kindness and words of honor while you are in our midst, and assure you that we feel glad and feel honored to have you with us.

Response by Dr. N. G. Carroll:

Mr. President, and Members of the North Carolina Dental Association:

I am not an orator, neither have I the reputation of an ordinary speaker, therefore my remarks may be brief, but you may measure my sincerity by the brevity which I use. In responding to the eloquent address by Mr. Smoot, I am so flattered that I am really embarrassed; and though we have heard but one voice, I am sure it gave sound and sentiment of every citizen of Greensboro. Yet it is no more than I expected; no more than each of the members of the Association expected, because every one knows the reputation of Greensboro for its hospitality. On behalf of the Association, Mr. Smoot, I extend to you a most cordial invitation to attend our meetings.

Mr. President, I wish to say that I am glad that I am a member of the North Carolina Dental Association, and I am glad of the work it has accomplished. As a young man, I am inspired by the words of Henry Wadsworth Longfellow, when he says:

"Lives of great men all remind us
We can make our lives sublime,
And, departing, leave behind us,
Footprints on the sands of time;

Footprints that, perhaps, another
Sailing o'er life's solemn main,
A forlorn and shipwrecked brother,
Seeing, shall take heart again.

Let us, then, be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labor and to wait."

Mr. President, we have felt the hospitality of this beautiful city in the beginning, and I am glad that I am here; and when I say *I*, you must remember I am the whole Association. And, sir, I assure you that our visit to your city will be remembered. I could allude to its railroad and educational advantages, but then its scope of usefulness could not be comprehended. Just here, if I were to allow myself, I would especially boast of its beautiful women; yet I acknowledge that I feel this sentiment in me when I enter any city in North Carolina.

I again extend to you, Mr. Smoot, and the people of Greensboro, a most cordial invitation to attend our meetings; and I feel sure that our stay here will be pleasant.

The Annual Essay by Dr. F. S. Harris was then read, as follows:

ESSAY.

Not the smallest task in filling the place of essayist for any public occasion is the choosing of a subject, and that not for the lack of subjects of vital importance, but on account of their multiplicity. The wide fields spread such a profusion before us of flowers and fruits, we are bewildered as we begin gathering up our handsful here and there, only to throw them down again, when perchance we come upon new beauties, it may be in some obscure nook, half hidden from the eye of man, and perhaps only half appreciated because of their modest obscurity. In his saunterings your essayist happened upon such a nook as this and culled some—flowers, shall I say? Yes, *flowers*, though perhaps not deftly arranged as an artist might do it, to make up a bouquet that would give general delight by its beauty and fragrance.

Now it may be I have awakened in you anticipations of something new—an exhibition of new species in the flora of our profession. This I cannot hope to do, yet our excursion shall not be confined to the walks and borders of a memory garden containing nothing but those things cherished by our ancestors. Botany teaches us that there is nothing more capable of development than the plant order; and while the novice is filled with delight over what he considers something new, deep down and back of it all your experienced observer sees its particular genus, and can trace the steps of its higher development, albeit that development may be sometimes in outward form and beauty at the expense of inward worth and fragrance.

The special genus to which your essayist was attracted was "Ethics." Do you confess to disappointment, and do you consider this too old a flower and out of cultivation for lack of fragrance and beauty? Suspend your judgment, and see if from this bed we may not gather you a posy which shall not be altogether without fragrance. I shall not bother my head, though, about anybody who can see nothing beyond the mere outward form and seeming. To such an one

> "A primrose by the river's brim
> A yellow primrose is to him,
> And it is nothing more."

Don't imagine from my introduction that I am going to make you a flowery speech. I shall do nothing of the kind. Even with the added incentive of a fine day in May and the inspiring presence of ladies who grace this occasion. I have only given you thus much to lure you on and to get your attention.

I shall not discuss flowers. If I shall display some before you, I only ask that you select those you think worthy and cast aside the rest.

Ethics, concisely defined, is the science of human duty. Broad? As broad as the field of human activity and of human need. Old? Yes! Born with the creation of man and from that other creation when forth from his side sprang that human relation which should evolve the exercise of human duty. Then was ethics born.

When a lad I used to stay in a country cross-road store where I came in contact with many negroes who were a source of unending fun to my young companions and myself. Living at a period of history which shook hands with the old regime and the new, I was acquainted with the best type of the old time darkey, with whom one could be familiar, yet not be liable to be met with the impertinence that characterized the new type. To these we would put questions of philosophy or of ethics, and would elicit from them oftentimes answers characterized by shrewdness of observation, though dressed in quaint and homely garb. Among other profound questions, we used to put this stunner: "Well, uncle! I want to ask your opinion—is the philosophy of ethics arbitrary or otherwise?" "I dunno, boss, but I *reck'n* 'tis." After the long interval of years, it comes to me, in considering the subject of ethics, that there is in this more than a mere catch question to stun the ignorant or to paralyze by its high sounding terms. I mean this: Is not the philosophy, are not the principles of ethics the same they ever were, and must they not ever so remain? Has any higher system been promulgated than that which came forth from Sinai when the ten tables of stone—element of fixity and solidity—announced, first, man's duty to God, and secondly, man's duty to his fellowman? And when the seal of approbation was put on the underlying principle of all ethics by the Son himself in his epitome of the law as embracing the sum total of man's duty and the measure of God's requirements of the candidate for eternal life—"Thou shalt love the Lord thy God with all thy heart, soul, mind and strength, and thy neighbor as thyself?" One thoroughly impressed with, and whose life is dominated by this principle, I fear not his offending against ethics.

This is distinctively a commercial age. A feverish restlessness stir the public pulse. Competition, close and sharp, has invaded the domains of businesses that were hitherto characterized by their exemptions from the unseemly scrambling of the common mart, where things are bought and sold, and now everything is offered on the market, and bidding for patronage goes on lively. Class distinctions are seeking to be obliterated and it is put upon the basis of who has the most push; who can hustle the liveliest, "Get there Eli." The liberal arts and the learned professions are not free from the baneful infection, and from one point of view, standards are lowered. Ethical considerations are not receiving the regard that once prevailed, and we find ourselves prone to fall in with the spirit of the

age and justify ourselves with the old adage "*Tempora mutantur etiam mutamur.*"

The great civil struggle of the sixties left a large portion of our beloved land confronted with new conditions which necessitated a radical change in social and industrial institutions. With the abolition of slavery an important element in the make-up of class distinctions was removed. While there has always existed that pride of lineage which was not bounded by wealth in slaves or landed estate, yet it was a system that removed largely the necessity for personal manual labor, and was enervating and not conducive to the highest development.

Man had exalted womanhood upon a pedestal, and looking back it seems she had reached the acme of distinction as fitted and suited chiefly to wear soft raiment as those who dwell in kings' palaces and to adorn the home, be it palace or cottage. She is yet all these—*and more.* With the abolition of slavery, industrial conditions were changed. Cruel war, with devastating hand, had swept a large portion of our land as a scourge, and we were confronted with the problem of making a living from and out of nothing. Proudly we had poured out some of our best blood and had withheld nothing that would contribute to the maintenance of the defenders of our faith. Our womanhood, even the most delicately reared, proved themselves of heroic mould, sending their sires, their sons, their husbands, brothers and sweethearts to uphold the principles they held most dear, while they managed the affairs of the home and farm, reduced, many times, to the severest straits and privations, yet smiling through her tears and encouraging those at the front until they had to succumb to overwhelming numbers, and return to their shattered homes, many of them shattered in health and penniless, little left indeed except honor; not to rest from their arduous labors and the weariness of fighting, of long marching and exposure, and all the privations of these times that tried men's souls, but to retrieve their lost fortunes and to strengthen the things that remained. Nobly did our womanhood adapt herself to the new conditions and bring to her aid that self-reliance evolved by the fortunes of war, and she determined that she would not be an incubus, but would be a bread-winner, and then she began to enter fields hitherto monopolized by men, and throwing off the shackles that had bound her and the conventionalities that would not permit her to jostle against the rough edges of the world, she asserted her declaration of independence, and now man has to look to his laurels or be left behind in the race. Some find in these changed conditions an excuse for lowering standards and are not careful to maintain that courtesy and tenderness that once characterized their conduct toward the gentler sex. Because forsooth she has entered the arena and has become such a close rival in many lines of activity, they think she may be

rudely jostled and take her chances as a man. Your essayist does not believe that. He honors her earnest self-reliance and believes that she is no whit the less entitled to our homage and respect and tenderness. He would accord her still higher privileges and opportunities and has the faith that she will not transcend the bounds of propriety nor lose that charm which makes her the complement of man. We still rely upon her for sweethearts and wives, and we hold ourselves ready to draw sword in defence of her honor. Times change truly, and usages of society, but principles remain the same, and it will ever and always *be* right to *do* right. We have no right to let this commercial age rush us along over the rights of others. There *may* be different standards of right, depending on moral training and enlightenment, yet there is a responsibility for higher training which cannot be shaken off without the admission of a lack in our intellectual and moral natures. Something more than mere technics should be demanded of the student who comes up for graduation. There should be a chair of Ethics, or, at least, there should more time and attention be given to it.

Dental examiners should have a strict view to the ethics of the candidate and be satisfied of this, however well qualified technically he may be.

Ethics has to do with our duty to our fellowman, not alone in the idea of "owe no man anything." "defraud no man," but we must not rob him of any courtesy due him. "Honor to whom honor is due; tribute to whom tribute, custom to whom custom."

Why have a written code of ethics? Because some men's standards are so low, having by nature blunt conceptions, it would not do to leave things to their judgment. Our moral judgments may be preferential or may not. A thing or action may be superior to one substitute yet inferior to another or to an ideal. Who can say what is ideal and simply ideal? Men deal with ideals as though they were not attainable and not *expected* to be reached. Yet, I feel assured that "he aims too low who aims beneath the stars." We must strive toward our ideals, continually setting them up a notch.

We must *have* views, and we must *hold* them with clearness and with some independence and not as the stolid Dutchman represented in this colloquy: "Hans! what you dinks?" "Well, Shon, I dinks what you dinks!" "Well, I dinks so, too!".

So much for ethics in general. Now, let us consider it in its practical application to our profession. "Professional" ethics—yet not professional in the sense of mere outward show or profession. As has been said of beauty, 'tis

> * * * * "Not the show
> Of faultless form and feature, no!
> 'Tis the stainless soul within,
> That outshines the fairest skin."

This occasion affords a most excellent opportunity for discussing this subject, which has not received at the hands of our Association and the profession generally the consideration its importance demands. In looking over the volumes of the Cosmos for the past twenty years to find if the commentators agreed with me, as the old preacher said after consulting Adam Clarke and Matthew Henry on the text he proposed to preach from, I find only three or four distinct contributions to the subject, and its consideration is mostly overlooked in our Association discussions. There is a distinct advantage in coming together to discuss ethical questions. There may be uniformity of moral conception without unanimity of expression. Let each one be encouraged to state things as he sees them. The system of ethics may be not inaptly likened to a perfect orb or circle exposed to our view where different ones may have under observation a different segment according to his point of view. Happy he whose view point does not command the zenith only, or the nadir, but who, looking squarely at it, beholds the whole system in its clearest light. We cannot do our duty by our fellowman without doing first our duty by ourselves; yet we must not shut ourselves up in a cloister to study ethics. It is only learned by contact with our fellows. 'Tis not an abstruse quantity or quality only to be imagined or thought of, but it is the expression of plain living and high thinking. 'Tis wrought out of the living contact with our fellows and should be in its highest expression our vital breath and native air.

We have no ethical right to allow personal reference or personal feeling to tincture our discussions in association. True regard for ethics will make us modest. It will make us considerate of our fellow practitioner who, it may be, is younger and less experienced than we. It will see that there is no lack of encouragement accorded to young speakers, and will rebuke that superciliousness too often observed in men advanced in the profession. It will clarify our vision so that we will see that it is unethical to criticise rudely any one in our Association discussions. On the other hand, it will make us to see that it is unethical to present undigested, unprepared matter for the consideration of an intelligent body of men.

Dentistry must not permit its character to be determined by an ignorant public—but along this line your essayist will have something to say when the report of the Committee on Dental Education comes up for discussion.

Not all of us are gentle born, but there is in every one an innate idea of right and truth.

'Tis not the mere performance of Chesterfieldian courtesies or the rigid adherence to the rules of social etiquette. 'Tis no mere form, though it may be cast into the mold of usage.

'Tis the natural expression of kindness of heart, with liveliness of conception and intelligent appreciation of truth and right. 'Tis the

faculty of pleasing without compromising principle; of serving our fellowmen unselfishly, yet without slavishness; with cheerfulness, yet without ostentation; with dignity, yet without formalism. The moving principle of it all is, "Love one to another," which has been said by one to be the epitome and the paragon of all wisdom in ethics.

F. S. Harris.

Henderson, N. C., May 4, 1900.

Dr. Rominger, Dr. Keerans and Dr. Little were appointed a committee to consider and report on the Essay.

Under the head of Voluntary Papers, Dr. C. A. Rominger read a paper as follows:

A PLEA FOR CONSERVATISM.

This is a reckless age. Everybody is in a hurry; and hence, men jump at conclusions without sound premises to support them. Money is the god of America, and most men bow at Mammon's shrine.

It is an age of theories, many of which will not measure up in practice. We are often led far away from the truth by following a theory which in the end proves to be only an *ignis fatuus*. Who has not seen the fellow inflated with some theory or invention, until he could see millions in it, suddenly flop as a pneumatic tire and have to walk? Doubtless you have seen him walking with his head in the air, his hands in his pockets as if already he was clutching the gold in them, telling every fellow he met what a bonanza he had struck.

Every once in a while a Coch or a Pasteur bobs up with some new serum or lymph for consumption or rabies, or for all the other ills that have unfortunately been laid upon mankind. Everybody believes it. Everybody buys it. And, as usual, everybody dies with it.

Did you ever meet a dentist who thought he knew it all? Did he tell you his theory, and what great success he had had? Did you see him strut around at the Association as if he owned it? And, later, did there drop into your office some of his patients whose mouths were the records of his folly? Eh?

Conservatism is not crystallization, nor even stolidity. A man may be conservative and yet be very aggressive. Indeed, a conservative progress is the only real progress there is; for, if we are not conservative, we shall have to retrace our steps, and it takes lots of time to go backwards and start again. Besides, it is a costly experience to our patients.

There is much sophistry in the literature of the so-called sciences. We blunder so much where there is no need, all because we do not survey the ground thoroughly. The English in South Africa lost much

time, prestige and men, all for the lack of scouts. It is wise for us to learn by the failure of others.

We, as dentists, have made commendable progress, but it has not been by recklessness. The reckless have failed and "Ichabod" is written on their tombs. The industrious, skilful, conservative dentist has succeeded. *He* is the one who has marked the milestones in our progress.

I like enthusiasm and confidence in the young, but it must have the ballast of conservatism or it will be top-heavy, and a top-heavy craft cannot sail the high seas.

THE GERM THEORY.

Here is a field where many have pulled the bridle off and run wild. The individual communion cup is an illustration of what foolery can be thrust on a credulous public. An attempt has been made by these wild theorists to stop kissing, on the ground that germs would be communicated; but it is our opinion that kissing will continue as long as there are lovers, and there will be lovers till the end of the millennium, at least.

There are germs amical, and germs inimcal. If all the tomfoolery about germs that is written were truth, the human race would have been eaten up of germs long years ago, without a germ-fool to write its epitaph.

I believe in antisepsis, thorough cleanliness and germicides, but not in all the bug theories that antiseptic venders use to catch the floating dollars of the credulous public.

Do not turn fool about germs, and do not turn the germs all over to the fools. Conservatism is a good word to guide you here as elsewhere.

Some people are using mouth washes to a hurtful extent, so as to vitiate the normal secretions of the glands of the mouth. I want to be thoroughly understood in this matter. I believe in absolute cleanliness of the mouth as well as the external body, but the healthiest mouths we see are those who use the bristle brush and plenty of water after each meal. "Cleanliness is next to godliness," applies in dentistry as much as anywhere in the world. Dr. A. T. Atchison of Vanderbilt University, in lecturing to the students said, on one occasion, that "it is just as impossible for a person to have good health with as filthy a mouth as some people have, as it is for a soul to enjoy itself in hell!" How disgusting to see a person with filthy teeth!—especially a lady. It is here that the germs inimical thrive, and rapidly steal away the health of the individual. I am glad to say, however, that there are many persons who keep clean, healthy mouths and a sweet breath, for whom it is a pleasure to work. I once said to a young lady after examining her teeth and mouth, "If your soul is as clean as your mouth, you have a clear title to heaven." What we

mean to teach and impress on the mind is, not the use of a lot of sterilizing medicines so much, as a common-sense cleanliness which everybody can have at any time and everywhere.

FILLING MATERIALS.

The young dentist when he first leaves college usually thinks he must fill all teeth with gold. We have known older men in the profession who try to make the impression that they do not use almalgam. It seems to us, that a conservative course, one that renders the greatest service to humanity, is one of eclecticism. Much depends on the condition of the tooth, and the condition of the patient.

The purse of the patient often determines what course the conscientious dentist shall pursue. Many people who cannot pay for gold work, *can* pay for amalgam, cement, or gutta percha, and receive a great benefit. Porcelain and bridgework are out of the question for many people, who can pay for a rubber plate and have the real necessity of the case fully met.

It is not a question of how much I can get out of my patient, but how I can render the greatest service for the least expenditure?

Amalgam work is often done in a reckless, slipshod way that is often unworthy of the skill of the operator. I know of no department of dentistry that is so much slighted and abused as in the use of amalgam.

The conscientious, conservative dentist will be as painstaking and as skilful in inserting amalgam fillings as in the use of gold. But how often do we see nice gold work and by the same hand slovenly inserted amalgam fillings in the same mouth.

The secret of a good amalgam filling is that the amalgam shall be sufficiently plastic to thoroughly adapt itself to every part of the cavity under sufficient pressure of the operator. The utility of that filling depends on the three things, viz: that it shall not shrink, that it shall not swell, and that it shall not crumble at the edges. These three things can be secured by proper manipulation. Probably there is no perfect amalgam on the market, but there are several good amalgams which will give good results if properly manipulated. Amalgam probably saves more teeth than all other materials put together, and yet it is always slighted, cursed and abused. I am not making any plea for amalgam to the exclusion of any other materials. I am pleading for a conservative, safe practice in all departments of our profession.

CROWN AND BRIDEGWORK.

In this department of our profession, we need to exercise great conservatism. It is foolish to climb a rickety stairway simply to stand on golden heights. Yet this is often done.

A piece of bridgework put on teeth that have the least tendency to

Riggs' disease will be sure to fail. It is not wise to span every gap with a bridge. We need to study the mechanical forces, the health of the mouth, and the probable durability before we determine on a piece of costly bridgework.

A Logan crown is a good thing, but you cannot put it just anywhere. A gold crown often renders invaluable service on the posterior teeth, but it would be very much out of place in the front of the mouth, even though the patient might want it. A dentist must be inventive as well as æsthetic to render the best service. A crown which goes up under the gum too far will be one which you would rather not hear from afterwards.

Reckless work will wreck a dentist and rack a patient. Henee, conservatism is a watchword which every dentist should take along with him.

The window crown is another thing in our profession that often proves unsatisfactory. The tendency is to cut away the gold so as to expose as much of the face of the tooth as possible, and show as little gold as we can; and often thus in our desire to be æsthetic, we sacrifice strength and utility, and ere long the adhesion of the cement is broken up at the edges and we have a leaking crown. A bridge must always have strong abutments at each end. The easy possibility of cleanliness of a piece of bridgework must never be overlooked; for a filthy bridge means a diseased mouth, and a diseased mouth means a vitiated constitution, and a vitiated constitution is a signboard to the cemetery.

LOCAL ANÆSTHETICS.

Their name is legion, and many of them are about as devilish as the legion that destroyed the swine of Gadara. The same, conscientious and conservative dentist will always pass the secret preparations by and let the other fellow buy them. We cannot afford to use a preparation as a local anæsthetic whose formula we do not know and cannot know. Before the law we are held responsible for any damage that may arise therefrom.

Some of these preparations contain as much as a grain of cocaine to the syringeful of the liquid, whereas we can get all the anæsthesia we want from a preparation that contains only one and a half grains to the ounce.

An ounce will make from fifteen to twenty syringes full which is enough to extract from five to ten sets of teeth. We can get all the anæsthesia we want for extracting a whole set of teeth without using over one-fourth of a grain of cocaine, or ever getting any constitutional effect whatever.

Human life is priceless, hence we cannot play with it. Conservatism is the watchword and the guiding star of every skilful, conscientious dentist, whom it will surely guide into the beautiful haven of success.

C. A. ROMINGER.

Reidsville, N. C., May 7th, 1900.

Dr. Fleming read a paper as follows:

CAUSES WHICH TEND TO LOWER THE PROFESSION.

It is said that, though dentistry has been practiced since the days of the Roman Empire, its real birth as a profession dates back to the organization of the Baltimore Dental College in 1839. Since that time, the profession has enjoyed sixty years of progress unattained by any other profession in the world—its rapid strides have not been equalled by any other. But within the last few years many causes have seemed to be conspiring to lower the profession and bring it to the level from which it came—that of an ordinary trade. And it is to these causes and remedies therefor, to which I wish to call your attention.

Probably the greatest evil of all is, that of advertising. When we begin this we come at once to the ways of common trade and commercialism. Advertising is the very foundation stone of trade, but its practice sounds the death-knell of any profession. In itself it is difficult to remedy. Each man is a law unto himself, and if he wishes to advertise it is a matter for him and his conscience alone. There is no law against it. Newspapers rather encourage it; they make their living out of advertisers; and public sentiment surely does not condemn it.

But even if it is of itself difficult to remedy, there are causes leading up to it which may be easily remedied. In this State spite has had much to do with starting it; envy often starts it; personal grievances and broken pledges come in for their share of it. For instance, local associations, formed to promote the profession and uphold prices, are broken up carelessly. We join them, pledging ourselves to conform to the rules and regulations, and before anybody knows it, someone has broken its rules. And these breaches are such open violations of our pledges! For instance, we agree to charge certain prices for work—say $2.50 for small gold fillings; some one will put in five such for ten dollars, and will tell his patient he has only charged him for *four* fillings, and the fifth is "complimentary." However, the dentist will insist that he say nothing about it. Or, again, a dentist will do all a man's extracting "complimentary," provided he becomes his regular patient. All this may be very complimentary to the patient, but it is no compliment to any dentist to thus disregard his pledge and be the means of degrading the profession.

Such violations as these are done in secret, but in this, as in everything else, "be sure your sin will find you out." Sooner or later it all comes to the surface.

Thus such societies are destroyed, and every dentist is for himself. This often inaugurates a period of rate-cutting, which saps the very life of the profession. The more honest members withdraw from the

State Association, and matters grow continually worse till open advertising is the result. It is a natural sequence. Therefore keep all personal grievances out of the profession, and honor your pledges wherever given.

And then there are young men coming into the profession, and older men moving to new locations, who feel that they must advertise in order to get a start, and they think that as soon as they build up a practice they will join the local and State Associations and be decent again. So they advertise their cheap rates. You never see anything but cheap rates advertised, and very often it brings them in much work, for there are scores of people who live off of bargain counters, and a bargain counter in dentistry is just as acceptable to them as a bargain counter in dry goods. But this patronage is not of the best and cannot be relied on. And if you begin cheap work, you must keep it up. If you once put in an amalgam filling for $1.00, you can never charge that patient, nor any of his neighbors, $2.00 as long as you live. Rather than pay you your increased price he will go to some other dentist and even pay him more than he refused to pay you, and then do you untold injury among all his acquaintances.

In dentistry, as in everything else, it is easy enough to destroy prices, but a very difficult undertaking to build them up. Such methods of starting into the profession come from a wrong conception of what a profession is, and invariably act as a boomerang to any who have tried it.

There are scores of dentists in the State who would give money to be rid of practice which such methods have brought them. Probably the most treacherous form of this character of advertising is the habit of working for some influential friend in each community for merely a nominal fee, and then in return have him advertise you among his friends.

If you are going to advertise, do it openly and above board, take no underhand methods; it is bad enough at its best.

And then there is a class of dentists who drop into advertising unthoughtedly. They begin with the legitimate professional card; after a while, perhaps, they begin the administration of nitrous oxide and include that in their advertisements. And so the habit grows upon them, and they begin to advertise in hotel lobbies, city directories and college catalogues. They think they are doing no wrong, but the habit soon becomes so strong, that they will be surprised to find that a man bearing an honored Bible name has induced them to take a column advertisement in a 20th century edition of some newspaper. So much for advertising. It can only be stopped by never starting it.

Within the last few years the habit of shopping—going from one dentist to another and getting comparative estimates—has grown up almost unnoticed, and even some of the most conscientious dentists have not been proof against it.

Our prices will often differ even when we have no desire to underbid our competitors, but two dentists will differ as to the amount of gold one filling will consume, and their prices will necessarily differ. The cheapest man too often gets the work. This is an abuse for which we have no earthly excuse. We can stop it so easily, first, by charging for every examination we make; and, second, by absolutely refusing to make any estimate at all when we think it is to be used in competition.

I have one friend who rids himself of this class of practice by simply telling them that he will charge them more than any other man in the State, and his very candor often secures him the job.

There is no more sense in putting your head in a sling and hunting the cheapest dentist to fix your teeth, than for a man who has broken his leg to borrow some crutches and hobble around from one physician's office to another in search of the man who will set it cheapest.

In the matter of education, too, a great many have a wrong conception of what a dental education should be. We hear something on the subject every year, but we have never yet accomplished anything.

Dental colleges advertise that an entrance examination must be passed before students will be admitted to the dental course, but they say they will accept instead diplomas from any "reputable" schools and colleges. Now we probably have 150 reputable schools and colleges in this State, but if the colleges really mean that an educational qualification is essential before one should begin the study of dentistry, we should be compelled to acknowledge that we have not more than a dozen schools in the State whose diplomas should be recognized. A diploma does not always guarantee an education; there are too many graded schools, high schools and colleges granting them, and dental colleges trust too much to them.

And even when they hold such examinations, it is often a mere form. Any intelligent boy with only a few years' training in a graded school could pass one, and yet should we say that he is fitted for the profession? Nothing so helps the standard of any profession as a thorough education of its members, and nothing so lowers the standard as the lack of such education.

The profession also suffers at the hands of young men who think they know everything. They come into the profession having completed their courses in college, having stood well in their classes and having passed creditable examinations before the State Boards, but no matter how thorough their training, nor how varied their experience may have been in college, questions will arise in their office practice which have never come to them before. If they were at college they would not hesitate to consult a demonstrator, but they seem to think they ought to know it and are ashamed to consult some older dentist.

Of course it is possible to learn by experience, but the public suffers

from your experiments. If you do not know a thing, the next thing to knowing it, is to know that you don't know it; and when you come to that point it is a false pride that prevents your consulting an older dentist. To turn out a piece of work when you know you have not done it satisfactorily, is malpractice of the basest order, and not only injures you, but the whole profession. It may be a bit of malpractice in which we all engage, but the dishonor of it is none the less for that.

We suffer, too, at the hands of the law-makers, because they so often misunderstand the objects of our laws.

Little more than a year ago a bill was introduced in our Legislature to absolutely abolish all our dental laws, especially those pertaining to the examination to practice, and thus allow anybody to practice dentistry in the State. The bill was introduced by a Democratic member, by request, and was killed mainly through the efforts of the older dentists of Raleigh. Within the last decade a similar bill suffered a similar fate. This gives you some idea of the danger which threatens us.

A great majority of people think our laws are purely selfish; that men already in the profession are striving to keep others out. They give us no credit for an honest ambition to raise the standard of the profession and thus benefit mankind.

We ourselves by honest work and honest endeavor must create in our own behalf a public sentiment that will outweigh this ignorant prejudice.

No honest dentist will object to honest competition, and as a profession we have a right to demand of the State laws which will protect us from dishonest competition.

But finally, and underlying all the others is that same root of all evil, the love of money. For this men will stoop to unfair means, take unfair advantages, and sacrifice all honor. We have too many men in the profession for what they can get out of it, regardless of all else. The profession will never be what it should be till this is overcome, and there is no better way to overcome it than for each one of us to put our own house in order.

Therefore, let each of us see to it that the profession does not suffer at our own hands, and thus, unconsciously, we will raise it to heights never before attained. J. MARTIN FLEMING.

Raleigh, May 7, 1900.

DISCUSSION.

Dr. Everitt opened the discussion. He said: "I do not know when I have heard two papers that I enjoyed more. They both go right to the root of the trouble. Dr. Rominger strikes the nail on the head, and ex-

presses an idea that I have had in my own mind for several years, and he expresses it better than I could ever have done. I heartily agree with him in all the points of cleanliness and ethics. It is an admirable paper and I hope it will be read when published in our Proceedings, and not only read but stored away for future use ; it will be valuable.

"In my friend Dr. Fleming's paper, he said some very good things. I wish every man here would apply them and ask himself the question, have I been guilty of these accusations? We have all, more or less, violated those rules in ethics which he has pressed so closely home. Those two papers, it seems to me, might be discussed till 12 o'clock to-morrow."

Dr. Ayer said : "I would like to say that I enjoyed both of these papers. If our foresight was always as good as our hindsight, we would often escape the pitfall. I think that all of us learn as much, if not more, by our mistakes than by our successes. I have been a great experimenter, and I have experimented to my own hurt, but I will try to be more conservative along these lines in the future.

"I highly commend Dr. Fleming's paper also. I do not believe in low prices, but you cannot charge more than people can pay. If a patient comes to you and says, 'Doctor so and so, did my work for such and such a price,' and you charge him more than he did, you have got to make some excuse—say that he uses cheap material, or something of that kind. You will have to use your judgment and conscience and let the future take care of itself."

Dr. Turner said : "Mr. President, this looks very much like a Raleigh meeting to me, but there is one point in Dr. Fleming's paper to which I want to refer very briefly, and I think you will all bear me out, that there ought to be more disposition on the part of

practitioners to be more friendly, courteous and kind. If a man is engaged in the same kind of business that another man is, he feels that the other man is his enemy and he wants to beat him down, but that disposition ought not to prevail. When I go away from one of these State Associations, after being thrown more in contact with the brethren, I feel very much more kindly toward them than I did before I went there, and dentists are such good fellows they ought not to fight each other.

"I do not believe in discussing prices very much, because I think a man's conscientious duty ought to compel him to do justice, no matter what prevails. It is very difficult to obtain a uniform price at the same place. But the point I want to impress is this: that the dentists ought to be more friendly, more sociable and feel more brotherly. It is the rarest thing in the world where two lawyers get in a squabble that they do not stand by each other before the thing is over. I feel very kindly towards other dentists whom I know because I always find some good point that attracts me towards them after meeting with them at the Annual Convention."

Dr. Ramsey said: "I want to take issue with Dr. Ayer in regard to the fee bill. While it is impossible to agree upon a fee bill in every detail, yet you can take the vital points and live peaceably and friendly with each other. Dr. Little and myself have practiced in the same town for four years without a clash, and it makes me a happier man to know that no antagonism has existed between us."

Dr. Horton said: "I am delighted to hear the gentlemen express themselves. I think that often a clash is brought about by men not understanding each other. Patients will lie; they will go off and tell what was said to them in confidence.

"I do not know when I have enjoyed a paper more than Dr. Rominger's, and when we come to the question of bridge-work he strikes the key-note, and as he says, we ought to be very careful along this line of work."

Dr. Rominger said: "I enjoyed Dr. Fleming's paper very much, and heartily endorse it in all its particulars.

"I want to take up one small thing in my paper, probably what would be regarded as the smallest thing in it. Even at the risk of the loss of the good opinion of the Association I will speak of this, and that is, the use and the careful manipulation of amalgam. I am not advocating the use of amalgam to the exclusion of any other material—I am not an amalgam crank—and I am not going to say anything in favor of the *greater* use of amalgam but the *proper* use of it. I want to speak of the greatest failure I have ever made in the profession. You know it is right hard for us to make confessions, but we profit more, probably, as Dr. Ayer said awhile ago, by our failures than by our successes. I went into this profession about ten years ago in Wilmington. I inquired about the use of copper amalgam, and some spoke favorably of it. I used copper amalgam for three or four years, and it was the greatest mistake I ever made in the profession. It was the most disappointing, the most humiliating work I ever did, and I have ground out as many of those fillings as I have had opportunity to do since. Copper amalgam filling is the hardest filling at all; it will attach itself to the walls, but the filling will corrode and that corrosion will wear off. Just under the filling it will disintegrate, and it is the most disgusting thing you ever saw. I make the humble confession that I made a very great mistake in its use. I will say, also, that many times we see beautiful gold work in a mouth and by the same hand

slovenly amalgam fillings. If a man cannot use amalgam well, he ought not to use it at all. Some dentists can fill teeth with it fairly well. I want to say to these young men that your college advantages have been equal or superior to ours, but you will learn some things by experience that no professor can tell you."

Dr. Osborne said: "I want to say something and don't know what to say, and I have been in that fix ever since these men read their papers. I am like the Dutchman who said 'the more he thought of Betsy the less he thought of her.' Now, what I know I know as well as anybody, and what I shall say, perhaps you all know. I have been at work ten years, and what I shall say has already been said by me or somebody else. I want to tell you about the ball burnisher. You can press the burnisher and get all the excess of mercury out of the amalgam, but you need not expect the amalgam or anything else to save a tooth if you do not prepare the cavity properly. You make the cavity a little larger inside than out, and clean it out thoroughly and it is ready for filling.

"In speaking of the first paper, on Conservatism. Oh, yes, we must have that. It will not do to jump right into a thing; but, then, those kind of people do more good than anybody else sometimes.

"As to crown and bridge-work, I believe they have a place in dentistry; they have some place but a very small place, I think. There is hardly anything that you can mention but what has a place. But I am not an advocate of bridge-work. I saw this in the *Dental Journal* once: Some person wrote and asked this question, 'Why not just bridge across and fill between bicuspids and molars!' Of course everybody was down on him. Teeth are like a cow's hoof—the tooth must spread and have its own movement.

Some time ago I had occasion to take out a bridge for a fellow who came from a dental college. I would not have had it in my mouth for anything. It was so very offensive."

Dr. Parker said: "I think we learn a great deal about amalgam by experience, and we do not know much about it when we get our license. My idea is that a thorough mixing of amalgam is what is necessary. I press out a quantity of the amalgam, drier than the balance, very dry in fact, and cut this into squares. If I find that I have any excess of mercury I put on more of the dry, thus the surface is finished and you have no excess.

"Before the papers are passed, I want to express myself as approving them highly. Relating to the fees mentioned in one of them, it is absolutely a matter of impossibility to have anything like a systematic fee arranged. I do not think this is the right thing. I have never looked at it as being professional or reasonable. I have seen it tried and fail. The thing we need is the golden rule within our hearts."

Dr. Everitt said: "As far back as I can remember, there was a gentleman who I thought knew more about amalgam than any man in the State, and I tried to follow out the lessons I learned from him. I used to use acidulated water to incorporate my amalgam, then wash it thoroughly in diluted acid with alcohol and soda, but I have never been able to put in amalgam fillings like his. Later on I found that the use of tinfoil in the absorbing of mercury was good. Ten or twelve years ago I found that I could work gold more satisfactorily than I could amalgam. I came to the conclusion that it was because I did not know how to use amalgam, and if I know how to-day it is accidental, and all my successful fillings are by accident. You can take any proximal cavity and prepare it as dry as

you can get it without using the dam, then put the dam on and it will open your eyes. You will find much decay still to be removed if you make a good filling. Another point in the use of amalgam, as Dr. Osborne says, you must have your cavity a little larger inside than out."

Dr. Parker said: "I am positively opposed to the use of tin. I believe it deteriorates. I have found where I accidentally got the fillings too plastic and took up my excess of mercury with tin, that the surface of the amalgam filling could not be polished, and instead of using the tin I wipe it with chamois skin. I have found tin very unsatisfactory and believe it the wrong thing to use."

Dr. James said: "Dr. Rominger and Dr. Osborne have cast grave reflections upon copper amalgam. While I have seen and had miserable failures from it, especially in wisdom teeth, I have seen copper amalgam fillings stand better that any other. It is true that they have failed, but all amalgam fillings fail sometimes. I believe we can preserve the teeth with copper better than anything else."

Dr. Everitt said: "Dr. Rominger's and Dr. Fleming's papers show much thought and study, too deep for this Association to comprehend, and they ought to have been published and sent around to the members of the Association two or three months ago so that they could have been intelligently and scientifically discussed. I suggest that some action be taken to have the papers published and sent to the members of the Association before the next meeting so that they can be more intelligently discussed."

The Association then adjourned to meet at eight o'clock P. M.

EVENING SESSION.

Association was called to order at eight P. M.

Dr. Rominger asked for some expressions on the use of anæsthetics. He said: "We all condemn most of the patented anæsthetics, but there are some that have been used very successfully. One gentleman said that he had found none that was equal to pure alcohol, which relieves the pain very much, in fact it has been said that no pain whatever was felt. I think it is largely due to the hypnotic influence. If I can humbug anybody to that extent I have done the tooth no injury, but otherwise it is a dead failure. I would not deny for one minute the hypnotic effect on some people. I think myself that is probably as good an anæsthetic as we have. I would be glad to hear some remarks on local anæsthetics, those injected into the gum tissue about the teeth. It is a question in our profession, it appeals to our desire to overcome pain, and it is before us, whether we will accept it or not."

Dr. Spurgeon said: "I expect I have had as much experience with cocaine as any of the young men in this Association. I was present at Vanderbilt University about the first time cocaine was ever used for the extraction of teeth. It was regarded as a great success. Some were inclined to think that the patients were fibbing, but we were made to believe there was no pain about it. We used about a 4 per cent. solution of hydrochlorate. I used it in a great many cases, and without any unfavorable results, until four or five years ago. A little girl came to me to have her tooth extracted; I used the cocaine as usual, and the child's pulse got very weak and slow and she seemed to be dying away; it was not like a faint. Finally the child recovered, but that was enough to frighten me, so that I am afraid to use cocaine except in small quantities."

Dr. Spurgeon then spoke of the use of eucaine. He said results could be gotten from eucaine that could not be gotten from cocaine. Eucaine will produce fatal results, but it takes more of it. I always use the salts, and never use more than $\frac{1}{8}$ of a grain, regardless of how much water I use. A colored woman once came to have a tooth extracted while I was in college. She would not have it taken out until we put some of "that stuff" on it. We were in quite a dilemma, and one boy said, 'Here is some H_2O; that is the best thing I ever tried.' Another said, 'Yes, that is the thing.' The woman went into ecstacies about how easy it was. I would not be surprised, after all, if the psychic suggestion is not the anæsthetic.

"A child in my place some years ago stuck a needle in the ball of the heel and it broke off way under the tissue, and the doctor brought her to my office to have me use cocaine on it. I injected the cocaine below the tough tissue, and we had to make several incisions before we could find the needle, but the child sat there and looked at it without batting its eyes at all."

Question—"Do you use a larger quantity when you extract a good many teeth at the same sitting?"

Answer—"I would not use more than $\frac{1}{8}$ grain at all."

Question—"Is there ever any complaint of pain next day?"

Answer—"Not when I use eucaine."

Dr. Horton said: "If I ever had alarming symptoms it was with eucaine. I had a patient that I thought would die, and I did not use but $\frac{1}{4}$ of a grain. The same effects that were manifested in cocaine came out in the use of eucaine. I now think it better to cause a little pain than use these things."

Dr. Jones said: "I am not a eucaine man, as I never

used a great deal of it, but I think eucaine better than cocaine. It is considered now not the best practice to use it hyperdermically. As regards the efficacy of cocaine, it sometimes unquestionably fails. I had a patient to come in with a very difficult tooth to extract, and I extracted it without any pain. In a few days he sent me another patient with a tooth in about the same condition. When I took hold of the tooth you could have heard the patient scream for some distance. It does not act uniformly. Considering the danger in their use I do not know that we are justified in making so many experiments with them. We should be very cautious about those preparations whose ingredients we do not know. I do not believe we, as a body of men who claim to be scientific, and claim to practice according to the best modes, are justified in using that which we know nothing about. I think we ought to shut down on secret preparations."

Dr. Smithwick said: "I have not used cocaine in a long while, and probably never will use it again."

Dr. Horton said: "I for one do not object to putting myself on record, that in preference to cocaine or eucaine, I use nitrous oxide."

Dr. Ayer said: "I want to concur with Dr. Horton. I do not believe in any kind of local hyperdermic anæsthesia. If a patient comes back to you with a swollen jaw you do not know but that the injection used caused it. I would use gas instead."

Dr. Rominger spoke of the danger in the use of cocaine and eucaine. He said he went to his druggist in Reidsville and they together made a preparation that was perfectly safe as follows:

LOCAL ANÆSTHETIC.

℞	Cocaine Hydrochlorate	1½ gr.	
	Morph. Sulph.	½ gr.	
	Atropia Sulph.	$\frac{1}{60}$ gr.	
	Ac. carbolic	3 gtt.	
	Listerine	1 dracham.	
	Aqua pura q. s. ad	1 oz.	M.

SIGNA.—Inject freely into the gum tissue around the tooth or teeth to be extracted.

Dr. Rominger said: "A few days ago I extracted twenty teeth at one sitting, and I saw no constitutional effect at all. Dr. Cameron of Hillsboro said that I was one of the first men who used cocaine in North Carolina. I think the second subject I used it on was our President. He was a boy then, but he is younger now than he looks to be. I want to say this, that one, two or three cases do not prove a scientific fact. For me to say that I have given cocaine in certain instances and it did so and so, does not prove anything. We cannot establish a fact on one or two instances; it requires a number."

Dr. Betts told of an instance in extracting a lady's tooth when he used only a 2 per cent. solution of cocaine, and the lady almost fainted or swooned, but he took the tooth out without any pain. About six months afterwards he was adjusting a Logan crown for the same patient, and in making the joint he had to go under the gums some distance, and he placed a piece of cotton with the same solution over the gum. He held it there for a moment, and the lady said, 'What is that you are using? I feel the same sensation that I did when you extracted my tooth.'"

Dr. James said: "Instead of our using too much cocaine, we do not use enough. There is too much of dentists being afraid to use what is dangerous. If a physician went on the same line as that they would

have to go out of practice. They use strychnine and all such poisonous drugs, and they bring their patients back to life just as we could do. I use cocaine, ether and chloroform, and also gas. Some say they would rather die than to suffer several teeth being taken out. We ought not to let them say they could go to some physician who could take it out without pain, and we ought to learn to do this and not be afraid of it. I do not think we will kill many any way."

Dr. Turner said: "The key-note of this thing was suggested by Dr. James. It is not right for us to say we are afraid to use medicines that produce a certain effect under certain circumstances. It is a matter of judgment, and these few cases of idiosyncrasy ought not to debar dentists from their legitimate use. There are certain cases where some persons cannot use quinine without bad effects. I have known where chloroform was put in a tooth and the heart of the patient was so depressed that she was in a critical condition for hours. It is not, I think, our best policy to exclude trom our remedies those things which may be dangerous under certain circumstances, and so I feel that cocaine has its uses, but it requires a very decided judgment and prudence in order to manage it properly. It is often the case that we can see that a remedy that has no effect on one patient has a very decided effect on another. We cannot say that a man shall not use cocaine, chloroform or eucaine. It is a matter of judgment, and the dentist must exercise that judgment."

Dr. Bland said that a lady came to his office to have a tooth extracted, and he started to use cocaine and she told him she had heart trouble. After the extraction of the tooth the patient collapsed, and he said the blame wonld have been laid to the cocaine if he

had used it, but it was owing to the weak condition of the patient.

The subject was then passed.

The Board of Examiners asked for a week or ten days after the adjournment of the Association for examining the papers of the applicants. The time desired was granted.

Dr. Everitt, Dr. Whitsett and Dr. Tucker were appointed a Committee on Arrangements to attend the Normal and Industrial entertainment.

Dr. Tucker asked the pleasure of taking the Association to the College, which invitation was accepted with many thanks.

The Association then adjourned to meet at 9 o'clock A. M.

SECOND DAY—MORNING SESSION.

The Association met at 9 o'clock for the purpose of having a clinic, but owing to the poor facilities for the same, there being no conveniences whatever provided, the Association by vote decided to abandon the clinics and at 10:30 take up the regular order of business.

Prophetic Dentistry was the next subject in order. Dr. E. K. Wright read a paper as follows:

PROSTHETIC DENTISTRY.

The word "prosthetic" is more properly derived from "prosthesis", which means addition. Application: that part of surgery whose object is to add to the human body some artificial part in place of one that may be wanting, as a wooden leg, an artificial eye, an artificial tooth, etc.

The art of replacement. The manner. The ease. The material used. The effect. The durability.

Dental prosthesis more broadly applies to the mechanical part of the work; still it applies to nearly every branch of the profession. In

other words it constitutes the largest and most difficult part of dentistry; makes it a distinct branch of medicine, and aids materially in health, comfort and the enjoyment of life.

It does seem at first thought that as science and investigation become applied to the other departments of dentistry, rendering it necessary to sacrifice fewer teeth, that the importance of prosthetic dentistry would grow less.

This is not true, however. The degenerating influence upon the teeth, the ignorance and neglect of parents, the dread of pain, and careless dentistry which is sometimes unavoidable, the selection of the wrong filling material, or the finish of the material, these causes will always make the prosthetic work important. Being of such importance, it should not be neglected. What dentist here, but that turns such work over to his assistant almost the first day he enters the office? Is there any reason why? As long as such *is* the case we fail to see the natural expression of the face, which requires the most artistic talent. This should not be so, I repeat, because no part of dentistry requires such skilled ability and intelligent practice.

Of what use are these designs of art, molds, colorings and easy working materials furnished specially by manufacturers, if by lack of knowledge of selection and adaptability they are transformed into hideous deformities?

Why is it that such a state of affairs exists? Is it because of financial trouble with patients? Surely this cannot be the case. I believe the more educated and enlightened the people become, the more particular and fastidious they become, and with the majority, regardless of cash, within *reasonable* bounds, sensible people do not hesitate to pay value received for scientific and professional services, and are rather inclined to value the service by the price paid.

I fear the trouble comes from another source: One dentist of less experience and more time passes by and does some work for less money. All professions have suffered much by this perverted application of mercantile law to professional fees. When a dentist cuts his professional fee for service rendered and condescends to bargain for the definite products of his skill, he at once destroys the professional character of his position. Not only does he do this, but in the class to which he has descended, the question of price invariably leads to the consideration of cash, and the quality of his work, slowly perhaps, but surely deteriorates. Value your work by your professional standard and see that your work comes up to your valuation; make it a work of art designed and executed by an educated gentleman and specialist, and not for less compensation than would be obtained by a cobbler for a pair of shoes, a thing intended to grind the mud and grit and rocks. And give it your time and make it a thing of beauty, restore lost expression and the lines of the face, something that guards over the health, vigor and strength of the body by performing the most important function of digestion.

"Dentistry, as a true science and art, is built upon the foundation of a generous early education, is enlightened by a complete course of medical instruction, is specially trained by a full term of practical pupilage and recognizes no sliding-scale in the quality it renders."

Such dentistry will exercise influence in its own, and command respect among kindred professions; for it becomes thus a curative work second in importance and extent of its usefulness to no specialty of the great *Art of Healing*. E. K. WRIGHT.

DISCUSSION.

Dr. Harper opened the discussion. He said: "I suppose every man places an estimate upon himself and consequently upon the work he does. If there are two men practicing in the same town, their standards of dentistry may be very different, their conceptions of operations may be very different, and if they were each to make an estimate upon a given piece of work to be done, there might be a great deal of difference in the prices, and when the work was done, in all probability there would be practically the same difference in the work done. If a man is professional and ethical and places a proper estimate upon himself and upon his capabilities and upon the work that ought to be done, then he is going to place a price upon that work that will justify him in executing it according to the very best plan, regardless of time or expense to himself. So that perhaps we can see why there is such a difference in prices, and it seems to me that we might at all times have this in view in our dealings with each other, at home and elsewhere; and in that way elevate the standard of dentistry, elevate the practice of dentistry, and elevate each other's conceptions of these things to a higher level. For instance, in placing two fillings between centrals, or centrals and laterals, there are various methods of doing this. It can be done in fifteen or twenty minutes, or it can be done in an hour or more. Now while one man would take an

hour another man would take two hours. There is a difference of opinion as to methods and of rapidity in operation and of plans. It seems to me that we might discuss these matters here and reach conclusions as to what is the best method. If you have one idea and I another, we ought to get the benefit of each other's ideas. Instead of making a piece of work of small consideration, and looking at it from a financial point of view, I think we ought to find out what is the very best thing to do for the preservation and beautifying of the teeth. For instance, is it better to cut out the labial surface and make a big display of dental jewelry, or is it better to do the work from below, hiding all the gold possible, building against the frail wall if necessary? I for one do not believe in dental jewelry. I believe in concealing the gold as much as possible. Now, it is much harder, and requires more time to fill underneath than it does from the external surface, and there is one of the plans upon which men's conceptions of operation differ, and it may be a difference in price and a result in feeling. I believe, then, the best thing to do is to come together and study these things from a practical standpoint, and reach conclusions as to which is the best method, and have a method that is as high as it is possible to attain, always keeping in mind the beauty and appearance as well as utility, and then the standard is elevated."

Dr. Harris said: "I think there is a temptation on the part of those who are obliged to travel—they are afraid to risk settling down in a place of some size, and they keep moving around among the people trying to get better established—I think there is a temptation under those circumstances to do too much of what we call prosthetic dentistry. I think the young men ought to keep this in mind lest they fall into that

habit which would go with them through life. I see fruits of it often, and guess others of you have."

The discussion drifted to the subject of cleft palate, and Dr. Everitt related this: "Some years ago a poor woman saved sufficient money from sewing to take her daughter to a specialist in Atlanta. The child had a double hair-lip and cleft palate. Upon examination the surgeon said he could not do anything for her. The mother and daughter came back to Raleigh, and a Mrs. Davis, a personal friend of mine, met them and became very much interested in the child. They had started home on the freight train in order to save the expense of the hotel, and Mrs. Davis prevailed on the lady to stay until next morning and let me examine the child. She said the doctors she had consulted had given her no encouragement at all. Mrs. Davis told her if she would stay over and I did not give her some hope, she would pay her hotel bill. I met them and told her I would make an effort to relieve the trouble. The first thing, of course, was to make an operation on the hair-lip, which was very simple. In the course of two months they came back at the expense of Mrs. Davis. I started to do what I thought a very simple thing, to get that impression. The cleft was fully three-fourths of an inch wide—you could lay your fingers in it. The little girl could not swallow anything at all without throwing her head back. It puzzled me how to get that impression. Finally, I decided to take it in sections. I fixed up some plaster of paris, placed it on both sides of the cleft and allowed it to harden, then fitted a key through it, and took the impression and framed it up to cover the arches. I took an absolutely perfect impression in plaster of paris, and in ten minutes after I had put it in the plate, the little girl could ar-

ticulate plainly, whereas before only her mother could understand her. It was a wonder to every one."

Question by Dr. Harris: "I would like to ask if any one has any hints to offer on fitting a set of teeth in a mouth that has a hard glistening surface?"

Dr. Patterson said: "I had a case of that kind sometime ago. I thought I had the most perfect impression I ever saw. I made the patient a plate and put it in and it refused to stick. I made him another, and that refused to stick. I telephoned to Dr. E. L. Hunter to come up and examine the case. I showed him the plate and asked him if he thought it would stick to the mouth. He said, 'It is bound to stick; here is every outline perfect.' I told him the patient was in the chair and asked him to do me the kindness to step in and fit it in his mouth. He put the plate in and it came down. He called my attention to one little place, a little bump in the front, and he took a burr and cut it out. He tried it again and that failed, it dropped down again. He said: 'I once had a case like this and spent $200 on it and never could get it to prove satisfactory.' I told the fellow that I hoped that that satisfied him that I had not made a botch of the work. He said no, he did not think that. I got some gum tragacanth and sprinkled over the plate and put it in his mouth and it stuck alright, but I did not know how long it would stay. He came back in about a week and said he was getting along first rate. He said: 'I think you have done your duty and I will pay you for it.' I gave him some of this gum tragacanth and told him to use it from time to time. It seemed to draw the moisture from the hard surface. If any of you have any trouble in taking impressions on account of patients being nauseated, I think I can tell you what will relieve it. I have had two within the last twelve months. One old lady said

some one tried to take an impression several times for her, but it so nauseated her she could not bear it. I gave her about a four per cent. solution of cocaine with a little carbolic acid added, to rinse her mouth, and she stood it alright."

Dr. Everitt said he used about a three per cent. solution of cocaine in an atomizer.

Dr. Ayer said: "In putting in a plate I invariably use gum tragacanth. It makes it take hold of a dry surface or a glazed surface. It is to get them started off well. Some one said it also prevented irritation."

Dr. Parker said that he sometimes administered cocaine internally before taking an impression.

The subject was passed.

ORAL SURGERY.

There were no papers read on Oral Surgery but the subject was discussed as follows:

DISCUSSION.

Dr. Wyche said: "I once saw a case where a tumor appeared under the gum on the side of a tooth. The patient was put under the influence of chloroform, and it was taken out. It healed up but returned, and was taken out again in a few weeks. It continued to return and in less than a year the patient died."

Dr. Beadles said: "Several years ago I had a case, a man who had a slight swelling on the side of his nose. He was satisfied it came from the roots of his teeth: I was satisfied, on examination, that these roots were not the trouble. It went on from day to day and I finally called in a specialist to examine the nose. He said there was nothing wrong with the nose, and to gratify the patient's wife I extracted the teeth. The swelling continued and we told him what we feared was the trouble. He then went to Philadelphia and

a physician there operated on him, removing a cancer and most of the pallet of his mouth with it. I have been watching the case with some interest! It has now been four or five years, and I am anxious to know whether it will return."

Question by Dr. Everitt: "Do they usually return?"

Answer: "In my opinion all malignant cancers will return."

Dr. Spurgeon said: "About a year ago I was in Dr. Everitt's office in Raleigh, and while there a gentleman came in, that, to me, presented the worst looking case of Sarcoma that I ever saw. The alveola ridge seemed to be of cellulous tissue. The man was about sixty-five years old, and it looked altogether like a very hopeless case. I think Dr. Everitt took out a piece of bone and some pus and sent it to Dr. Battle to know what character of Sarcoma it was. I was in Raleigh about six months after and saw this same patient again. Dr. Everitt had performed the operation, dividing the tissues and taking out the bone piece by piece. About six months after it had grown together and seemed to be a permanent cure, though it was not thoroughly solidified."

Dr. Everitt said: "Not long ago a negro came down from Durham to the hospital at Raleigh for treatment. The man's kidneys being involved very largely, the physicians at the hospital did not think they would be warranted in making a diagnosis of the case until they could build him up. Dr. Knox advised me several times of the condition of the darkey, and as soon as he was able he wanted me to go down and consult with him. The best information they had at the time was furnished by a negro doctor from Durham. This same patient had been in the hands of Dr. Carr. Dr. Carr reported that when the darkey came to him he

found on the right side of the jaw evidences of an abscess, but that it was a temporary trouble from a dead nerve. He treated the tooth and heard nothing more from him. About a week or ten days later this negro doctor came and said that this darkey was in a very bad condition. He was sent to Raleigh and that morning I went down with Dr. Knox, and on examination I found an abscess on both sides and on the chin, and found that the lower jaw was in two at the joint of the first and second molars, and it broke in two during examination on the other side. Dr. Knox made an incision from the angle of the jaw on one side clear around to the other, and took out from the wisdom tooth the entire maxillary with the exception of the chin; when we reached the chin the negro died, apparently. We finally brought him round, but he was in such a bad condition that we did not give him any further chloroform and did not make any further operation. We got out all the bone but a little holding the anterior teeth. The improvement in that darkey's condition was such that granulation filled in and the jaw is entirely rigid. He has gained thirty pounds since the operation."

Dr. Ayer asked: "Under what conditions are we warranted in opening an abscess externally?" He told of a five or six-year old child who had an abscess, and the child's mouth had become so tense that he could not get the mouth open sufficiently to take the tooth out without inflicting great pain, and a physician was called in and opened it from the outside with a lancet. "Was he warranted in opening that abscess from the outside?"

Answer by Dr. Everitt: "No; I would work from the inside some how, if I could possibly get into the mouth."

Dr. Wright said: "A child about eight years old once came to me and I found the arch of the mouth very swollen and it had the appearance of a blood blister. I treated it with iodine for a day or two, then operated on it. Upon laying the wound open I found a glazed substance, perfectly hard and smooth, and so loose that I could not get at it with a forcep. It had the appearance of a perfectly round tooth. It was the crown of a second bicuspid. Instead of coming down as it properly should, it pointed across the roof of the mouth. For a day or two afterwards the boy was very much nauseated from the pus, but it healed up very nicely in a short while. For a long time the membrane was very thick, but now it has gone down until it is perfectly normal.

"I will also speak of a young lady, the daughter of a physician in my town, who came to me for examination. Her father was afraid it was a kind of tumor coming on, and wanted to take her to the hospital and have it treated by a specialist. I told him I did not think it was necessary, that I considered it no more than a calcareous deposit, and a treatment of iodine would bring it alright in a little while. At times when I was treating it, it would get very painful, and the mouth would become right much swollen. At one time it was so painful she wanted to look at it herself, and, raising her tongue before the glass, she said a piece of calcareous deposit burst right out, and directly another little piece came out. It was as large as the end of my little finger. After that the place healed up and there was no trouble from it."

The Association adjourned to meet at 2:30 o'clock P. M.

AFTERNOON SESSION.

CROWN AND BRIDGE-WORK.

Dr. J. S. Betts read a paper as follows:

FAILURES IN CROWN AND BRIDGE-WORK.

Crown and bridge-work has, of late years, caused more discussion in our meetings, and brought forth more articles in our journals than probably any other one subject or branch of work that comes within the purview of the dental practitioner. Why these repeated discussions; why these lengthy, learned articles in our journals? Because of the differences of opinions as to when and where this sort of work is indicated; differences in the *modus operandi* of construction. Surely, in the light of the wonderful achievements that have been wrought by the skilled and careful dentist, and the satisfactory results that have followed his labors in this branch of our work, no one can afford to make the assertion that crown and bridge-work is an absolute failure. That there are failures along this line, no one in this presence can or will deny. There are failures in every other branch of our work, and why should we not fear, and even expect failures to sometimes follow in this line? But where failure is met with in crown and bridge-work, it is almost always chargeable to either poor judgment, unskilled workmanship, or faulty methods.

The up-to-date, well-informed, skilled dentist of to-day offers crown and bridge-work, where it is indicated, as "salvation from the purgatory of plate-wearing." His aim is to construct, adjust and place crown and bridge-work in such a manner as that it shall give absolute satisfaction and perfect service. How far he has succeeded in this noble and praiseworthy endeavor it is not my purpose to discuss in this paper; but to point out a few instances of failure and the probable causes for the failure.

We must all admit—even the most careful and skilled of us—that we have made failures; but no shame should attach to a failure where one's best judgment has been used and honest effort has been made. Failure, to the man who learns, means experience, and experience is equipment, and equipment is wealth.

In discussing this subject of Failure in Crown and Bridge-work, I wish it distinctly understood that I do not do so from the standpoint of a skeptic; I am a believer; I am an advocate of this kind of work, and for good reasons. It is well, however, for the believer to know some of the reasons and causes for unbelief that he may believe the stronger—that his convictions may be sure and steadfast.

What with my own experience, my observation of other men's work, the articles that I have read in various journals, and the discussions at the meetings of the societies, I have come to the conclusion that

many and signal failures follow the construction and adjusting of crown and bridge-work. But, at the same time, and although forced to the above conclusion, I am a stronger believer than ever, though not an enthusiast, nor an extremist. We are only at the beginning of great possibilities along this line, and during this decade I fully expect to see achievements that will call forth from even the most skeptical, "*Mirabile dictu et pulchre visu.*"

There is nothing which marks the progress of civilization more distinctly or sets the bounds for achievement more definitely than the power of looking into the future And how may we look into the future? By studying the past. We have the past in crown and bridge-work in full view—on record, and sometimes, sad to say, much is in evidence. We see its trend and have noted its pace toward the goal of perfection. Although we cannot say with absolute certainty that the goal will ever be gained, yet we are safe in predicting that it is a strong possibility. The more carefully we study causes and effects the more accurate will become the prediction; and had we more Knapps and Alexanders and Hinmans, who are willing and glad to spend and be spent in experimentation, who are capable and competent and careful to point out to us causes of failure, and who are eminently worthy to go ahead and blaze the way for the rest of us to follow, we could entertain higher hopes of reaching perfection in the near future.

It goes without question that bridge-work, properly constructed and carefully adjusted, fills a place in dentistry that, so far, nothing else has been able to fill. It is the most serviceable and comfortable of all artificial dentures. Since there have been so many disastrous failures on the part of crown and bridge-work to give absolute satisfaction and perfect service, there must be a cause for it in each individual case. If we can show wherein lies the cause of failure, or some of the causes, then we shall be sure to progress that much, for surely no careful operator will make the same mistake the second time.

Perhaps the most fruitful source of failure in crown and bridge-work lies in the fact that men of poor judgment, insufficient, and, ofttimes, improper training, with little or no natural manipulative ability, undertake to do this kind of work. Failure must follow as a natural consequence, or, at least, it frequently does follow.

Failure often results from using as abutments teeth that are not strong enough nor healthy enough to carry out the command of "Bear ye one another's burden." They cannot "Fulfil the law" and order, requiring that thorough mastication precede deglutition. In some cases, however, a naturally weak brother may help another very strong brother to bravely, and without complaining, bear the burden of one or two comrades in arms who have wearied of the burden and heat of the day and have fallen by the wayside. It is a mistake to expect one tooth in crown and bridge-work to bear, with its own duties and functions to perform, the burden of more than one other

tooth. So, as a rule, failures must, as a natural consequence, follow where two teeth, as abutments, are required to carry several teeth between them.

In constructing Richmond crowns and in fitting bands for the all-gold crowns, as abutments, the lack of skill and judgment and knowledge on the part of the operator often compels failure to follow as a result. For instance, in fitting a band to a large first superior bicuspid, it is a most difficult matter to make a perfect fit under the free margin of the gum. As you know, in nearly every case the anterior proximal surface is frequently not only a perfectly flat one, but more often there is a decided depression or scoop-out which is most difficult to perfectly fit a band to, and I have thought it to be in some cases nearer an impossibility. In one or two cases with which I have come in contact, I think I would have scored larger success in attempting to fit a horse collar to a bob-tailed steer. If the bicuspid be sound, better results will follow the using of a half-cap crown upon it for the attachment; and, by the by, this method is gaining in popularity, I like it. If it be decayed on the proximal surfaces and the cavities extend well up under the gum, better results will follow if it be extracted and the cuspid used in its stead, using Dr. Alexander's excellent method of attaching to the palital surface with pins. This is a most admirable meth d; as evidence of which a case is doing excellent service for Dr. I. N. Carr, and is a monument to Dr. Alexander's inventive genius and manipulative skill.

Carelessness in letting bands extend too far under the free margin of the gum, or not far enough, in cases where indicated, have been so often and freely discussed that I shall not dwell on that here. Where they extend too far they cause irritation, which can seldom be remedied satisfactorily, and result disastrously; where they do not extend far enough they favor lodgment of food and filth, and this is annoying in the extreme.

I wish to go on record that I am now and always will be opposed to the use of open-faced or window-crowns for cuspids, or, as for that matter, for any other anterior tooth. In cases where the cuspid is badly decayed it is better to Richmond-crown it. Where it is sound, excellent results will follow the use of a palatal attachment after the Alexander method.

Six years ago a gentleman presented himself to me for an operation requiring the replacing of the left central incisor which had been lost trough injuries sustained in a run-away accident. The remaining central and the lateral next the vacant space were in an almost perfect condition. Some one had told him that a tooth could be put in by using an open-faced crown on the central and banding the lateral. I suggested a Richmond-crown for the central, and explained my reasons. He, however, went to Baltimore sometime afterwards and had it done as he had requested me to do it. The open-faced

crown for the central and band for the lateral have proven sad failures. The central and lateral must be sacrificed in a very short time; the gums are highly inflamed and the teeth are loose in their sockets. The central has died, probably, from being subjected to constant irritation. Did the work give any satisfaction at all? He says not.

Failures often result from faulty articulation In many cases where the abutments are all that could be desired to start with, a failure to properly articulate the dummies to the oppposing teeth will cause what might have been a perfect and permanent piece of work to be disappointing.

Attempts to construct crown and bridge-work on the part of men who have never received any instruction is a great mistake. While the average practitioner can and does follow instructions in performing many kinds of work, yet unless he thoroughly understands metals, and working them, he should not attempt to construct bridge-work. Such attempts almost invariably result in failures; then they, as a natural consequence, cry down crown and bridge-work. But bridge-work is not a failure in the hands of careful, skilled and conscientious workmen.

Neglecting to properly grind and protect with gold the tips of porcelain facings will result in the loss of facings.

Dr. J. A. Libbey, in the current number of the *Cosmos*, cites some instances of failures. One of them: A lateral incisor swung to a first bicuspid, causing it to become loose and decay the cuspid where the bar passed around the under surface of the cuspid, exposing the pulp.

Another point that is oftimes neglected or overlooked in making a bridge is that of cleanliness. There are very few permanent or stationary bridges that are self-cleansing, especially those that include the bicuspids and molars.

Great thoroughness is necessary in the preparation of the abutments to avoid failure of the whole work. The crowns of all teeth are cones, with the base at occlusal or incisal surface, and the apex at the gum line. A study of the relation of the enamel to the dentine would convince one of the impossibility of making a band, passed over the base of the cone, to fit at the apex or gingival portion of the tooth.

Lack of the proper exactness in constructing bridge-work will cause failure. They must be mechanically correct. Any undue lateral instead of perpendicular strain will cause the very result we wish to avoid.

The whole structure of man is, by the Master Mechanic, built on the very finest of mechanical lines; each part is endowed with the reverse function for the resistance of excessive strains on any part, and it is well to study these mechanical effects. They can and must be used to advantage in the proper constructing of crown and bridge-work.

The bridge is "artificial denture par excellence" when properly constructed and inserted, care being taken for the strength of the parts and for all lateral strains. If these mechanical principles are followed, fewer failures will result.

There are those who oppose crown and bridge-work and are bold in declaring that it has become a "fad," and that in time they all will become a source of annoyance to the maker, and of annoyance and filth and disease to the wearer. For the most part, this criticism comes from those who do not know anything, or who know very little, about it. They claim that it is "impractical, unreliable and filthy." Many are so, but that is not a good reason for condemning all.

There are those who succeed admirably in this line of work; and there are those who fail at it. Let those who fail take lessons from the successful ones and not discount anything that is beyond their own ability and attainment.

I am not satisfied with the number, extent and variety of the causes of failure which I have been able to cite, and I hope to learn much from, and be greatly benefited by, the discussion which I trust will follow.

J. S. BETTS.

DISCUSSION.

The discussion was opened by Dr. Alexander.

"In speaking of the cuspid and bicuspid mentioned in Dr. Betts' paper, I will say I have never seen a case yet of a bicuspid so badly decayed that it could not be restored by this cast filling method and used as an abutment for a bridge. A labial wall of enamel standing is all that is necessary. I have here a model of a badly decayed bicuspid, the inside cusp gone. Now provide that with a good strong pin and it would make an excellent abutment. If the tooth is decayed, no matter how far under the gum, you can burnish the gold down and make an almost perfect piece of work of it.

"Speaking of Dr. Betts' reference to going into crown and bridge-work without previous instructions, I will say that I would agree with him there, but somebody must make the start. When I commenced this work I had never seen a bridge constructed at all. I saw a bridge and worked out the problem myself.

Generally, I suppose, it would be wise to get instructions, because if you go to some one who has worked these problems out you get the information it takes you years to acquire by yourself. You can start with the information that the other man has taken years to get possession of.

"With reference to lateral strains, I do not like to construct a bridge of more than four or five teeth. The abutment teeth are not capable of sustaining the wear, tear and great pressure forced upon them when long bridges are made. You must sacrifice a certain amount of contour and make a straight bridge in line with the abutments. If there is much curvature, the leverage pressure will be so great it will eventually cause the destruction of the work. It seems that it has never been fully understood how these cast abutments are constructed. I do not see why any one could not do this work as well as I can, and I will make an effort to describe a bicuspid bridge abutment or filling. You take a perfectly sound bicuspid—we do not want any gold to show—cut off the inside cusp, let the tooth be cut away extending around full to the front, and cut it down to a feather edge on the interior cusp, then lay the metal to form the hood or base to be burnished over the tooth, so that the margin will be beyond the point of contact with the next tooth. If the margin is at the point of contact, the work will certainly fail. Make the hood by burnishing gold over the prepared surface. In dealing with live teeth, instead of making holes as I did formerly, I now make slight grooves on both sides and burnish the hood into these grooves. When this is burnished down, these parts that were burnished into the grooves will fit perfectly and act as a guide for the hood. Now place the hood in position, take an impression and invest it in an articulator, adjust the cusp and fill it with 22 karat

gold, and then place wax in between the hood and the cusp. Place it back in position and then remove the tooth supporting the hood from the articulator, invest the same and solder, and you will have just what you see here. (Exhibiting a complete cast or hood abutment). One of the most important things I have learned is the thickness of gold to be used. I find that No. 120 rolled gold foil is just exactly right and can be secured without any trouble; it is exactly right for backings and all base work, and I use foil No. 30 for lining purposes."

Dr. Ayer said: "I want to endorse what Dr. Betts said about a man having instruction in bridge-work before he starts out to do bridge-work. When I was in college we did not have an instructor in bridge-work. We had two men there who did bridge-work, and they taught a few boys how to do it. I was one among the few who did not know anything about it at all. I learned what I could from them, and when I came to Raleigh I made some bridges and thought I knew something about it. If anyone had criticised my bridge-work I would have been very much offended. I have picked up a great many points by my own experience and from attending Dental Associations, but I think a man should have just as thorough course of instruction in bridge-work as in any other part of the work.

"In regard to what Dr. Betts said about open-face crowns for abutments, there are places for open-face crowns. I have an open-face crown which I have been using ten years. My idea is to wear that crown as long as I can, and when that fails I have lost nothing but the crown of that tooth. When the nerve dies, I propose to have the abutment cut off and have a Richmond crown made. I think we all claim that dentistry is only patch-work any way; and suppose

we have to do a piece of work for the same patient two or three times, if we give them satisfaction, why not do it?

"I am very much impressed with this porcelain work. A student, whom I met on the train the other day, showed me some nice porcelain work. I have done some porcelain work, but on account of the gas we have in Raleigh I have to bake all that I bake at night, and cannot get as good light as I should have, and for that reason I have not been able to go on with it as I would have done if I had had sufficient heat. I am going to put in an electric furnace. I have had only one tooth to break off, and that was the first that I made. It was for a countryman who had only four teeth, and did all his masticating on the four. I think this is coming to be the proper kind of work. I never make more than one abutment when I think one will do, for sooner or later another will have to take the place of it. It is well to have as few abutments as you can get along with."

Dr. Everitt said: "I cannot quite agree with Dr. Betts in his idea of extracting a bicuspid that is decayed, but he may be entirely correct. In putting in a bridge I want all the strength for the abutment that it is possible to secure. If he cannot make a good shell crown there, I think it would be well to make as nice Richmond crown as possible, and secure it to the cuspid, and use Dr. Alexander's method of pin abutments. I believe with that exception I can most heartily endorse the whole paper as a most excellent production, and one that should receive the plaudits of the Convention."

Dr. Turner said: "I was very much struck with the manner in which Dr. Betts handled the subject of brige-work: because it occurred to me that he had gone into bridge-work very cautiously, and it seemed to

have grown upon him as it does many people who have had, perhaps, little experience at first, and afterwards finding what the results were, began to extend the field of his operations. I believe that the typical artificial tooth is a metalic crown. I am satisfied that the progress that has been made in bridge-work for the last few years has redounded greatly to the credit of dentists, and I am greatly struck with Dr. Alexander's plan in cutting grooves in order to make a hood instead of an open-face or window-face crown. I agree that these window-face crowns are very dangerous."

Dr. Alexander said: "In connection with this hood abutment, I spoke of using the groove on the side of the tooth, and not using the pin at all. In some cases judgment may prompt you to use the pin, but use it in the groove instead of going near the nerve and destroying the nerve."

Dr. Smithwick said: "I use either a Davis crown or a Logan crown. By putting a little band of gold around the crown it makes it equally as strong as the Richmond crown, with very much less pain to the patient, and is so much quicker. I think it is certainly stronger than a Richmond crown."

Dr. Beadles said: "I consider Dr. Alexander certainly an expert in this line. We should not attempt to do things that cannot be done. I am satisfied that we should not make the bridges too long. We should have them in as many sections as possible, and sometimes that is done by a double crowning. That is, if you have a bridge from the second molar to the first or second bicuspid, make two bridges instead of one, and if anything happens to it you can take one away without interfering with the other. As to open-face crowns, I have had good success with the open-face crowns that I have made. They have stood five or six years, and I do not know that I have had any

failure along that line. I discovered for myself some time recently the method of tipping a porcelain tooth, which was of great satisfaction to me, but I found that it was original with somebody else, too. I find that Dr. Alexander's method is not quite so simple as mine. I tip the porcelain facing with gold."

Subject was passed.

Dr. Everitt introduced the following resolution endorsing Dr. Turner for an appointment on the Board of Supervisors contemplated in the Otey bill:

Resolved, That in order to secure worthy and well equipped men for service in the dental corps for the army and navy, authorized by the Otey bill now before Congress, it is the desire of this Association to participate in the endorsement of Dr. V. E Turner as a suitable appointment on the Board of Supervisors contemplated in this bill, on account of his well-known ability, his untiring zeal for higher professional attainments, and particularly for his long experience at the head of the State Examining Board.

Resolved, That the thanks of this Association is hereby tendered to Gen. George M. Sternberg for his influence and efforts in behalf of the proper recognition of the value of dental surgeons in the army and navy.

Dr. Turner acknowledged the compliment paid him, and thanked his friends of the Association for their efforts in his behalf.

The report of the Committee on Revision of Constitution and By-Laws was read by Dr. Keerans, chairman of the Committee.

On motion, the matter of printing the Constitution and By-Laws, as presented by the Committee, was referred to the Publishing Committee with instructions to edit the same carefully and to make a contract with a good printing house to publish 500 copies; that said printing house be requested to furnish the Committee on Revision proof of this matter sixty days before our next meeting, in order to have the same correct and ready for publication on approval of the Association at that meeting.

Dr. Everitt moved that the State laws regulating the practice of dentistry be incorporated. Carried.

On motion, the Rules of Order copied from the Virginia Association were adopted.

Dr. F. S. Harris of Henderson reported a case of successful prosecution of a violator of the dental laws of the State. One C. D. Smith had been practicing in Vance and Warren and adjoining counties for two or three years without license, and last summer Dr. Harris, on the part of the State, began to investigate it and secured some witnesses, bringing the case to trial before Col. W. H. Cheek, a magistrate in Henderson, and Smith was convicted of violation of the dental laws of North Carolina and fined $25.00. However he had secured, after the investigations were begun, a temporary license from a member of the State Board, but he failed to appear before the regular meeting of the Board in May; so, of course, his license has expired, and if he continues to practice in this State, he is a violator and liable to be dealt with as such.

Dr. Spurgeon moved that the Treasurer be instructed to honor an order from Dr. Harris for his conviction.

Dr. Harper, of the Committee to Consider the President's Address, made the following report:

REPORT OF COMMITTEE ON PRESIDENT'S ADDRESS.

MR. PRESIDENT:—Your Committee appointed to consider the President's Address beg leave to report, that they have carefully considered the same and find in it many things to commend to the earnest consideration of the members of the Association.

Among these the Committee would especially call attention to the suggestions offered as to the discussion of papers.

Too little attention has been given to this in our meetings, and the suggestions of the President, if carried out, would go right to the root of the matter.

We find the whole paper replete with practical thoughts and we recommend that when published it be given earnest consideration by every member of the Association.

H. D. HARPER,
D. E. EVERITT,
H. V. HORTON,
Committee.

The report was adopted.

On motion the Secretary was requested to ascertain if there was any reason, by law, why the name of the Society should not be made to conform to the seal of the Society, and if not, that hereafter it be known as the "North Carolina State Dental Association." *

The Association then adjourned till 9 o'clock Friday.

ENTERTAINMENT AT NORMAL AND INDUSTRIAL COLLEGE.

The most enjoyable feature of the meeting was the play, "Pygmalion and Galatea," given in our honor by the young ladies of the Greensboro Normal and Industrial College on Thursday evening.

We met promptly at 8 o'clock at the Guilford Hotel and were driven over to the College in carriages provided by Dr. Tucker.

On our arrival at the College we were met by Dr. McIver, and were at once conducted into the commodious hall, where Miss Woodfin Chambers delivered the following unique and witty address of welcome:

"It is my privilege in behalf of the Adelphian and Cornelian societies to extend a most cordial welcome to the members of your honorable profession, which has done so much to alleviate the sufferings of poor pain-racked humanity.

"We hope that to you this evening will be as pleasant as we know it will be to us; for we have so often sat before you and implicitly obeyed your injunction of 'Now, open your mouth,' 'Now shut your mouth,' that we feel a kind of rebellious joy in turning the tables on you to-night, having you in our power and being able to do just what we please, while you have to sit still in your chairs and suffer in silence. But we will not be unkind, but will graciously give you permission to

*Acting on the suggestion of the Secretary the name "Society" has been replaced by the name "Association" throughout this work.—PUBLISHING COMMITTEE.

treat us as we have often treated you. At any time you want to, you may cry out, 'Stop, please; I just can't stand it any longer.'

"I have often heard it said that a dentist must be a diplomat as well, but I think he is also somewhat of a politician, for his final panacea after all else has failed is a 'pull,' judiciously applied.

"We welcome you also as our true and trusted friends, feeling that no matter how miserable and lonely we may be, we have only to apply to you for aid and that you will fill for us an aching void.

"We are glad that you have chosen this city as your place of meeting, since it has given us the pleasure of having you here to-night, and we sincerely trust that your visit to our institution will give you as much pleasure as it gives us to welcome you here.

"In conclusion, let me express our earnest wish that the world may serve you as faithfully as you serve the world.

"It is an unexpected pleasure that we have with us a large number of representatives of the Grand Lodge of Odd Fellows, and to them we also extend a most cordial welcome."

Following her address came the play, splendidly rendered and interspersed with vocal selections.

After the play Dr. Tucker, President of the Association, delivered the following response to Miss Chambers' address of welcome:

"*President McIver, Members of the Faculty, Student-body, Ladies and Gentlemen:*

"My heart is doing just like it always does when I face beautiful women. My fellows, truly we are in the city of flowers, and surely we have come to the most beautiful floral garden of God's creation. Young ladies, I want to remind you of the fact that dentists are progressive. Their motto is 'To dare—always to dare.' Possibly many of these young men (like myself) will try to persuade you, before leaving this hall, to be as kind to us as we have been to you, and fill for us an aching void.

"In the early morning we look out on the green sward of nature and see the little daisy, with its face turned heavenward, filled with the sparkling dew, catching the bright smiles of its Creator, and rendering its praise in purity and beauty; and this we say is comely, fair and beautiful. As we steam in the harbor at New York we behold a large figure of woman, the Bartholdi Statue of Liberty enlightening the world—and this excites that spirit within us that makes this the land of the free and the home of the brave; and we call this majestic, great and grand. And while we love to think on these as beautiful and grand, and standing for wonderful achievements, yet they lack

that 'one touch of God that makes the whole world akin'—the thing not named in beautiful flowers and imposing statues—the soul. And then we inquire what constitutes a State, and we get the answer, 'Men, high-minded men'—and we say 'Yes,' but the inquiry is not fully answered until we add that which stands for liberty—courage, purity, fidelity, culture and love—noble woman.

"Back of the canvas that throbs, the painter is hinted and hidden. Back of the hand that receives, thrill the sensitive nerves of receiving. Back of man's courage stands woman's valor, firmness and fortitude. Back of man's high-minded qualities stands woman's purity, fidelity and love. And this, Dr. McIver, is a reason all true patriots love and take interest in their State institutions. This, sir, is a reason why we bid you Godspeed in the noble work of educating the young womanhood of dear old North Carolina.

"Heaven's first gift to man is thine.
God bless thy rosy girls,
Like sylvan flowers they sweetly shine.
Their hearts are pure as pearls."

"Members of the faculty and student-body, for this kind consideration of our pleasure, the royal reception and entertainment you have given us, for the full enjoyment of every moment, in the plain Anglo-Saxon, with a full heart, we thank you, we thank you."

After a few remarks by Dr. McIver, we were presented to the young ladies, and all of us spent a most pleasant hour.

THIRD DAY—MORNING SESSION.

The Association was called to order by the President, and the subject "Orthodontia" was called.

Dr. Benton read a paper as follows:

ARE IRREGULARITIES OF THE TEETH TRANSMITTED?

That relation between the two sexes called marriage is indeed a serious matter, and the responsibilities thereof are far-reaching. Good looks are characteristic of some families. Irregularities of the features are transmitted from parent to child through many generations. The subject of inheritance is a wonderful theme and one of great interest both because of the curious facts it presents and the practical bearing it has upon the welfare of every individual. *Direct inheritance* is the variety most generally recognized, that, in which the progeny par-

takes of the qualities of one or both of the parents. *Indirect inheritance* constitutes that variety in which the child does not resemble its father or mother, but bears a striking likeness to an uncle or an aunt. Another variety is that in which the child is more like one of its grand-parents than either its father or mother; or, what is more astonishing, it may display some of the characteristics presented only by a remote ancestor. This form of inheritance is known by the scientific term *atavism*, derived from the Latin word *atavus*, meaning an ancestor, or grandfather's great-grandfather. A fourth variety is that in which the child resembles neither parent, but the mother's first husband. The aquiline nose is to the present day hereditary in some families, having existed therein for generations back.

The tendency to obesity often appears in a family generation after generation. Complexion is not exempt from the influence of heredity Physical qualities are transmitted by each parent with a tendency on the part of the father to transmit the external appearances, the configuration of the head and limbs, the peculiarities of the senses and of the skin and muscular conditions; while the size of the body and general temperament or constitution of the child is derived from the mother. Peculiarities of the hair in color and structure are often transmitted. It is recorded of a family that for generations some members had a single lock differently colored from the rest of the hair.

Perhaps the most remarkable influence of the law of heredity is that seen in the transmission of the color of the eyes—the offspring possessing one brown and one blue eye, the one derived from one of the parents and the other from the other parent. In regard to fertility and sterility the law of inheritance has its influence in certain families, from which they may escape only by assiduous care.

In both the vegetable and animal kingdom longevity is greatly influenced by heredity. The power to live for many years is exhibited in the oak, while in a short time the peach tree must die. At ten years of age the robbin becomes gray and old, while the rook caws lustily until a hundred! The ass is much longer lived than the horse. Harvey, the distinguished discoverer of the circulation of the blood, is given as authority for the statement that Thomas Parr died, during the reign of Charles I, at the age of 152 years. He left a daughter 127 years old, and his great-grandson died at 103 years.

Undoubtedly, deformities are transmitted to the progeny, it being by no means rare to find that the immediate ancestors of those afflicted with superfluous fingers and toes, club-feet and hair-lip were the subjects of like malformations. Well-formed parents will transmit these qualities to their children with scarcely an exception. Like begets like. Unfortunately, all parents are not beautiful. Parents gifted with bright minds engender intelligent children, while those steeped in ignorance are stupid from birth. The effects of inheritance is, perhaps, more marked upon the mind than upon the body.

Nowhere, possibly, is more conspicuous the effects of inter-marriage than in the teeth and jaws of the offspring. A child inheriting a narrow and contracted jaw from some of its ancestors, and very broad teeth from another, must undoubtedly inherit a case of irregularity of the teeth. J. H. BENTON.

Newbern, N. C.

DISCUSSION.

Dr. Rominger opened the discussion. He said: "This is a well-written paper and I commend it. It is a question of vital importance. What I wish to say is on the practical point of correcting irregularities. A young dentist when he leaves college is doubtless very anxious to get hold of an irregularity to correct, and he thinks he is going to do wonders with that irregularity and make a great reputation, and very often he finds that he has tackled a white elephant. Things do not move in the direction they are expected to. We do not always succeed in the correction of irregularities as we hoped to when we began. I want to say to the younger members present that they will always find much more difficulty in cases of irregularity where there is great protrusion. You all know that the tendency of a tooth is always forward. I remember trying some years ago to correct two central incisors that protruded beyond the laterals and canines. I moved those teeth in position under difficulties; I applied the bands to the posterior teeth, coupled up four of the back teeth, and applied a screw, and instead of moving those front teeth I moved eight teeth forward. Both the bicuspids and canines were moved forward. I took the whole appliance off and let them return to their normal position. I banded two of the molars together and soldered the bands, so that if one moved both would move. During the night I would get the pressure backward, and in the morning I would tighten those screws when the patient came to my

office, but it took me six months on that job. We have those difficulties, and I am not an exception along that line."

Dr. Everitt said: "Most every operator has a different way or system of practicing on irregularities. I think Dr. Rominger lost a great deal of valuable time by not putting on that head-gear to start with. In a nutshell, I will say that I make that head-gear or bit, as I call it very often, do the work itself, and the ligatures I apply are simply to hold in position during the day, and the result is I move those back teeth forward very little indeed. Another point I have learned from experience: after I have corrected an irregularity I never take off my appliance under two years, and generally let it stay three or four years, and then I do not have the teeth going back. You will find that you have to correct that irregularity again if you take it off sooner."

Dr. Jones read a paper under the head of "Orthodontia," written by Dr. Hawes, as follows:

ORTHODONTIA.

Mr. Chairman and Fellow Members:

I have been assigned a task, in the attempt to perform which, I am impelled by naught save a deep sense of my duty and a desire to be loyal to my profession. It is needless for me to say to you that, in entering the discussion of this important, and to a great extent, obscure subject before you, many of whom have made our chosen profession your life work, I feel a delicacy, and am conscious of my inability to treat it in a measure, to say the least, satisfactory to myself.

Like all other branches of our profession, this subject is governed by the immutable laws of nature. In no other sphere of our work do we find more varied forms and irregularities presented to us for treatment, nor a greater number of difficulties to be surmounted. And in order that the success to which we should aspire in treating a case may be attained, great patience and perseverance is necessary on the part of both the operator and the patient.

Beside the operations of general surgery which are performed upon the mouth in common with the other parts of the body, dental science gives specific directions for those operations of special surgery demanded in the corrections of irregularities in the arrrangement of the teeth. To properly correct an irregularity of any kind, a knowledge of the relative position of the permanent and temporary teeth at a period soon after the appearance of the first teeth of the permanent set is necessary. There is nothing more destructive to the beauty, health, and durability of the teeth, and on disturbance more easily prevented, than the irregularity of their arrangement. In proportion to the deviation of these organs fr m their proper position in the alveolar arch, are the features of the face and the expression of the countenance injured. It always increases the susceptibility of the gums and alveolar dental membrane to morbid impressions.

For the judicious management of second dentition, a correct knowledge of the normal periods of the eruption of the different teeth, is necessary. All unncessary obstructions of these organs at this early period of life should be avoided, as it tends to mar the perfections at which nature ever aims. The mouth should be frequently examined from the time the deciduous teeth begin to shed, until the completion of second dentition; and when the growth of the permanent teeth so far outstrips the destruction of the roots of the temporary, that the former are forced to take an improper direction, such of the latter as have occasioned the obstruction should be immediately removed. In the dentition of the upper front teeth this should never be neglected; for when they come out behind the temporaries, as they frequently do, and are permitted to advance so far as to fall on the inside of the lower incisors, a permanent obstacle is offered to their subsequent proper adjustment.

Nature, when permitted to proceed with her operations without interruption, is able to perform her work in a perfect and harmonious manner. But the functional operations of the body are liable to be disturbed, from an almost innumerable number and variety of causes, and the impairment of one organ often gives rise to derangement of the whole organism, for the relief of which the interruption of art not unfrequently becomes necessary, and it is fortunate for the well-being of man that it can in so many instances be applied with success. The class of irregularities characterized by protrusion of the upper front teeth is one that we frequently meet with, it detracts more from the beauty of the face and gives the most hideous expression. The correction of such irregularities may be easily effected if the proper course is pursued at the proper time. I desire to present for your consideration the history of a case which I have in my care for treatment:

At the age of four years, the patient had diphtheria, and after recovering suffered at intervals for nearly two years of tonsilitis, and at times it was very difficult for her to breathe. The mother of the

child says that she acquired the habit of mouth breathing. The young lady at the age of nineteen came to me, with the superior central and lateral incisors protruding about a half an inch out of line, desiring to have them drawn back in position. I could see no great obstacle n the way, except the age of the patient. With all the other points to be considered in my favor, I decided to attempt to regulate them. The first thing that I did was to take an impression of both the upper and lower jaws and make a model of each. After having made the models, and having studied the nature of the case, I decided to try *first* the use of a strong rubber band. With German silver I made bands to fit over the six-year molars and soldered on to the band a small ring in which to fasten the end of the rubber. I banded the lateral incisors and attached small rings to the bands through which to pass the rubber band to hold it in position and prevent its slipping up on the gum. You will observe from the model that there is plenty of room for this regulation without the removal of any teeth. I have the patient using for a mouth wash "Wampole's Antiseptic Solution." I began the operation the first of April and have drawn the teeth inward about a sixteenth of an inch.

I would be glad to hear from some of you who have had more experience in treating such cases. C. T. HAWES.

Dr. Alexander said: "I have had considerable success with the head bandage and an appliance fitting over the four teeth. I let the patient wear the bandage at night without any inconvenience, and the teeth soon come back in place."

Subject was passed.

Dr. Harper read a paper as follows:

DENTAL EDUCATION.

A search for something new on this subject is as a search in the breakfast hash after a dinner and supper have been made from the same gobler.

Cultivated, educated brains, urged forward by love for the profession, have guided tongue and pen, until it seems there is nothing left to be said. And yet many students whose education is very limited are entering our colleges.

If I were asked for a brief biography of such a one, I would simply write, "Pulled before he got ripe."

The once slow, plodding educational machinery of our State is no longer drawn by mules and oxen, but is now driven by the invisible electric current with such momentum that the whole social fabric is tingling in harmonious accord.

Shall the dental profession, hypnotized by the imaginary "Rip Van Winkle," allured by the dollars and dimes that are in waiting for the new doctor, relying supinely upon demand and necessity as our monopoly, allow ourselves to be swooned into the deceitful arms of contented attainments, until the educational upheaval shall be dropping volcanic stones and lava upon our serene heads?

In contrast with this picture, I would be unfaithful to the profession if I did not proclaim the magnificent attainments achieved by hundreds of dentists, which attainments, whether as scientists or surgeons, have been made possible by education.

Nor would I by the least scintillation fail to recognize the masterful hands and minds employed in lifting the dental profession from its original barber's pole and blacksmith's sign up to its present national, intellectual and social spheres.

What stronger argument is needed to inspire young men contemplating the dental profession, or older ones who are already practicing, with a burning desire to fit themselves elaborately, not only for making the dollar, but with Spartan courage, Herculean fortitude and Mark Hanna strategy, to make these sacrifices, render those services and perform that labor that will snatch the remaining threads of the profession from the hands of incompetents and charlatans, brush the mud from the wheels of the dental "mug-wump" and by a centralization of educational powers thrust the profession up to its legitimate recognition, wherein its capacity for the alleviation of human suffering and its compensation will both be magnified.

Without dental education these things are not obtainable, for greatness is only achieved as a fruit of labor.

Take a fifteen-cent man and he will do fifteen-cent work and not be worth fifteen cents to the profession.

But educate such a man, whether he is already in the profession, or desiring to enter it, expand his conception of professional ethics, professional pride and professional responsibility, induce him to attend this Annual Chautauqua, and you make of him a dollar man and he will do dollar work and be worth a dollar to the profession.

He who robs himself of the educational advantages of these meetings robs the profession and his patients.

Can the uneducated comprehend the pathological action of drugs? or the influence of micro-organisms on tooth structure? or the ramifications of facial neuralgia?

Dental education gives dental capacity. Capacity gives strength of character. Character gives possibilities, and upon possibilities hangs our destiny.

A head without brains cannot be educated; nor can a head without brains make a dentist. Having both, the better the education, the better are the possibilities of making a good dentist.

"When God endowed human beings with brains," says Montesguien, "He did not intend to guarantee them," and the only guarantee we can give is education.

But not every educated man can make a dentist, nor is every good dentist educated.

Tact plays a conspicuous part in all of our successes.

Holmes, in a very homely way, give this illustration of the power of tact:

> "Tact clinches the bargain,
> Sails out of the bay,
> Gets the vote in the senate,
> Spite of Webster or Clay."

Dentistry, like all other professions and callings, has her share of theoretical, one-sided, impractical educated men, who have not the tact to make theories subservient to practical, profitable ends.

Adam Smith could teach the world economy in his "Wealth of Nations," but he could not manage the finances of his own household.

Dean Swift nearly starved in a country parish, where his more practical classmate Stafford became wealthy. Will that apply to some dentists?

We can scarcely overestimate the advantages of education in dentistry, but we must not expect too much from books.

Bacon said that "Studies teach not their own use, but that there is a practical wisdom without them, won by observation."

Some one has said, "The use of books must be found outside their own lids."

How beautifully this applies to our every-day practice.

"Common sense," said Wendell Phillips, "bows to the inevitable and makes use of it."

In conclusion, let me say, first acquire knowledge, then learn to apply it, and the result is, a dentist. H. D. HARPER, SR.

Kinston, N. C.

PATHOLOGY AND THERAPEUTICS.

Dr. J. M. Parker read a paper, as follows:

PATHOLOGICAL CONDITIONS—THE EFFECT OF REFLEXION.

Pain is possibly the most ordinary indication of disturbance of function. The seat of pain does not always indicate the seat of disturbance. Many anomalous sensations prove to be reflexions from some remote point. Disorders of the liver often give pain under the right shoulder; renal calculi are shown by pain along the thigh; affections of the hip-joint are manifest at the knee; gastric complications are very commonly the cause of headache or functional heart disturbance. Foreign bodies in the ear will produce an irritation referred to the

throat or larynx. Amputation of the uvula causes distinct pain in the ear; the presence of worms in the intestinal canal will cause a persistent cough, relieved only by a discharge of the parasite. All will have observed the eructions of pain in rheumatism and gout, and the translations to the different parts of the economy. Spasmodic contractions of the muscles, often very painful, are familiar instances of reflex action. Contortions of the face, twitchings of the eye-lids, blindness, trismus, tetanus, etc., are further examples. It may be said that physiological functions, whether voluntary or involuntary, are ordered through the reflex power. For instance, walking and all mechanical movements of the body, as well as respiration, deglutition, secretion, etc., and, from a pathological basis, hysteria, epilepsy and vomiting. The collegian has often witnessed the demonstrations of his tutors of the phenomena of excitation on the decapitated frog. These are things that may be put down as evidences of the laws governing reflexion, a recognition of which should have a bearing on our practice. The same abnormal action does not always create the same kind of pain. Inflammation, for instance, gives rise to a quality of pain according to the str cture or kind of tissue involved. The pain may be dull and permanent or insignificant, while soreness will be prominent. The general facts are familiar to us all and the principles involved demand the attention of the dental specialist to an extent hardly appreciated by many who would rush their practice in compliance to the ignorant demands of the patient or in violation of their own solemn obligations and high responsibilities. The laws governing reflex action are varied and profound in their ultimate fulfilment, the phenomena being consummated through the most exalted element of the economy, the nervous system. These phenomena are subject to a common classification that of centric or eccentric, according as the point of reflexion is referred to the ganglionic or cerebro-spinal centers, or to the peripheral termination of sensory nerve fibres. The excitants of the nervous system are innumerable, active or passive; the former when the reflex is immediate on the excitation, and passive where the force is stored within the ganglionic centres, to be involved again under given specialized conditions. Oft repeated violence to the nervous centres renders them morbidly sensitive to excitants, thus making them incapable of retaining the nervous energy. From this fact arises the many instances of reflex action and the intolerance of the many influences usually deemed insignificant. Within the province of the dentist are recognizable many instances of the reflex power, both centripetal and centrifugal. The transition of nervous influence from one tooth to another is observable in every day practice, and the more common the occurrence the more care should be observed in diagnosis that a misleading opinion may not be formed through the statements and experience of the patient. Probably the most common source of reflexion is the third

molar, to which attention should be especially directed. Here the determination of influence is centrifugal, the pain being experienced in one or more of the anterior teeth. Clinical experience in such cases leads to the recognition of an irritable pulp in the affected molar rather than to any other possible condition. On the other hand, an irritable pulp of one of the bicuspids or incisors, while the pain is, in a measure, localized, will be reflected to the temple and forehead, ear and eye, and to all parts supplied by branches of the fifth and seventh pairs of nerves, and yet the limitation is not here always in its fulness, but through the influence of the great sympathetic nerve the entire system becomes involved. These remote effects are, perhaps, still more aggravated through the agency of acute pericementitis. Here the circulation is disturbed, pyrexia ensues and complete prostration is the unwelcome sequel. Impoverished blood, and especially gouty diathesis are prominent sources of dental irritation. In peculiar conditions of the blood of pregnant women and chaotic conditions of young women, we find toothache as reflex pain.

Among the proximal causes, too, is to be mentioned malaria poison, whereby the nervous system and energies are depleted and made the subject of contingent impressions. Frequently is presented to the dentist jaw-ache traceable to rheumatic origin, so diagnosed by exclusion. Headache is also associated with anæmia, which may be relieved by a tonic course and improved hygienic surroundings. Neuralgia of the face or jaws is not always the result of diseased teeth, however. Exposure to drafts, affecting the system locally or in general, will cause pain in these parts often by modifying the terminal fibres, producing neuralgia resembling that of a dental origin. Anti Kamnia and Codcin and a warm poultice are recommended in severe cases of this kind. Often we have patients come to us who have gone voluntarily or have been advised to go to the family doctor, who prescribes for them, not recognizing the cause of the trouble, which is often perricementitis from a dead or suppurating pulp. Thus they are not sent to us as the proper ones to treat such cases, but fall into our hands as the last desperate effort to get relieved from that horrible suffering which has by reflection extended to the glands and nerves of the face and neck, and in some cases to the whole system.

For the relief of the ordinary cases, as just cited, no better remedy than Ammonol, in 10 gr. doses, can be had.

Cases have been reported of spasms of the masseter, temporal and pterygoid muscles of mastication from reflex action. Also fatal spasms have been reported from toothache. Records are replete with dento-neuralgic suffering, casual reference to which is intended only as a reminder of the responsibilities resting on the practitioner, and the possible demand of a new survey of the fields for the occupancy of the coming dentist. The general medical diagnostician falls far short of a proper appreciation of pathological conditions existing in the dental apparatus; and on the other hand, for want of a broader

knowledge of the possibilities of reflex influences, the specialist is unable to cope with the affections that appeal to him for treatment.

Allow me here to express and emphasize my firm conviction that all these associate conditions demand the dentist's attention, exclusive of that of the general practitioner, if he is to rise above the partial culture and attainment ascribed to him by his supposed peers in medicine.

Why is it that the greater mass of the people suppose dentists to be incapable, unprepared, or not the proper ones to thoroughly treat the troubles above mentioned? Why is it that when he does do this and writes presciptions, and examines complex cases under orthodontia, etc., that they do not recognize his right to certain fees for it? I am convinced that a change along this line must be brought about before our profession shall reach that point which we all hope to see it attain.

I am aware that this conviction will be opposed by many who would charge an improper assumption on the part of one denominating himself a specialist. But if your duty is confined to filling teeth and constructing artificial teeth, to you the claim does not apply. The highest prerogative of a dentist is not in these things, but in being able to control the conditions that lead to the necessity of your interference. Dentistry, you say, is ever an independent profession; it is, or should be, entirely independent of the dictation of those who would ascribe to themselves the most exalted wisdom. But dentistry, on the other hand, in all its various phases, is eminently dependent on every source of knowledge attainable; and to the degree that knowledge is possessed, so may it be utilized to the attainment of the end sought. Only in the right exercise of the highest power, may a practice be counted independent. There is no limit to the benefit possible to be bestowed on patients, and no limit to the right exercise of our skill and knowledge; and when the highest education shall place the dentist beyond the boundary of his present inability, then will our profession prove to the world the advanced claims of its most ardent devotees.

J. M. PARKER.

Goldsboro, N. C

Both subjects were passed without being discussed, owing to limited time.

Dr. Rominger, Chairman of the Committee to consider the Essay, makes the following report:

Mr. President and gentlemen:

Your committee, appointed to report on the essay, beg leave to say that the paper is one of rich merit and filled with suggestions worthy of the thoughtful study of each member of our profession.

For lack of time the Association cannot discuss these points of interest now, because of much that is yet to come before us; hence your committee did not make a symposium of the matter contained in the essay, but we recommend a careful reading of it by each one when it shall be published.

C. A. ROMINGER,
E. P. KEERANS,
J. B. LITTLE,
Committee.

The report was adopted.

Dr. Smithwick brought up the subject of visiting the Orphanages and doing their work free of charge. Dr. Harper and Dr. Wright spoke with feeling on the subject, and are heartily in favor of contributing what time and talents they have in furthering this good cause.

Under the head of Unfinished Business, the following resolutions were offered:

Resolved 1. That the North Carolina Dental Association cast a vote of thanks to Dr. McIver and the young ladies of the Normal and Industrial College for a most excellent entertainment tendered our body.

Resolved 2. That a vote of thanks be tendered Mr. J. W. Selby for the "Smoker" tendered our body.

Resolved 3. That a vote of thanks be tendered the railroads, hotels of the city, and citizens of Greensboro for courtesies and hospitalities extended.

Resolved 4. That a vote of thanks be tendered the gentlemen making exhibits of dental goods.

A vote of thanks was tendered to President Tucker for the splendid entertainment in the way of a drive given to the Association.

The Executive Committee offered a motion that any expense incurred by the local dentists of the City for the entertainment, etc., of the Association, be paid by the Treasurer on presentation without being endorsed. Motion was carried.

On motion, the Stenographer was allowed $35.00 and expenses for her services in taking the proceedings of the meetings.

Morehead City was selected as the next place of meeting, the time of meeting being left with the Executive Committee to decide.

Election of officers was the next order of business.

President: Dr. E. J. Tucker.

1st Vice-President: Dr. W. B. Ramsey.

2d Vice-President: Dr. I. H. Davis.

Secretary: Dr. J. S. Spurgeon.

Treasurer: Dr. D. L. James.

Essayist: Dr. N. G. Carroll.

Publishing Committee: Drs. Fleming, Wright and Parker.

Dr. Turner and Dr. Jones were elected to succeed themselves as members of the Examining Board.

The following were elected delegates to the National Association at Old Point Comfort:

Drs. D. L. James, J. S. Betts, S. P. Hilliard, J. M. Fleming, D. T. Smithwick, H. V. Horton, H. D. Harper, C. A. Rominger, J. S. Spurgeon, N. G. Carroll and I. H. Davis.

Dr. J. M. Ayer and Dr. C. A. Rominger were elected to represent this Association at the World's Dental Congress in Paris.

Dr. H. D. Harper was elected Supervisor of Clinics.

Drs. Everitt, Fleming and H. V. Horton were appointed as Executive Committee.

INSTALLATION OF OFFICERS.

Dr. Everitt was called to the chair.

Dr. Hunter and Dr. Rominger were appointed marshals.

The President, Dr. E. J. Tucker, on being installed, said: "I do not reckon you need any speech from me, you have had enough, but it is said 'Out of the abundance of the heart the mouth speaketh,' and it is said

again that we sometimes get 'Too full for utterance'—this is a dispensary town, though. I proudly accept as a memorial possession this testimonial emblem of your esteem for me. I appreciate the high position in which you have placed me, and I can truly say the measure of my ambition is full to overflowing. Would to God, I had the language to express to you the feelings of a full heart of gratitude and devotion. My friends, I thank you for this honor."

Each of the officers as they were installed, made an appropriate speech in expression of their appreciation of the honor accorded them.

The Association, in token of its love and fraternal friendship to Dr. Hunter, who had sent in his resignation as an active member of the Association, elected him as an honorary member for life.

The Association adjourned to meet at Morehead City at the time fixed by the Executive Committee.

E. J. TUCKER,
President.

J. S. SPURGEON,
Secretary.

NOTE.—Since the adjournment of the Association, the Executive Committee has seen the proprietors of the Atlantic Hotel at Morehead, and secured from them reasonable rates for our next meeting, which will be held commencing Wednesday, June 26th, 1901.

The Board of Examiners will meet at the same place on Monday, June 24th, 1901, for the examination of applicants for license.

(BY ORDER OF THE EXECUTIVE COMMITTEE).

LIST OF THOSE GRANTED LICENSE.

The following are the names of the successful applicants for license before the Examining Board at Greensboro:

Bender, O. J.
Biggs, J. D.
Chambers, E. O.
Coffey, L. M.
Harbin, J. W.
Humphrey, L. M.
Jacobs, J. M.
Keerans, James L.
Marler, J. G.
Reagan, C. W.
Roach, J. A.
Sadler, C. D.
Sinclair, J. A.
Watkins, J. C.

LIST OF MEMBERS.

Alexander, C. L.
Ayer, J. M.
Baldwin, A. M.
Ballentine, J. A.
Banner, J. E.
Battle, J. J.
Benton, J. H.
Betts, J. S.
Biggs, J. D.
Bland, C. A.
Bland, M. A.
Boyette, C. S.
Boyette, Frank
Brooks, S. O.
Carr, I. N.
Carr, R. L.
Carroll, N. G.
Cole, R. S.
Conrad, W. J.
Crawford, E. A.
Culbreth, N. M.
Dameron, L. L.
Davis, I. H.
Davis, W. Ross
Edwards, W. H.
Everitt, D. E.
Fleming, J. M.
Foreman, J. W.
Fox, L. S.
Frazier, F. C.
Goldberg, E. H.
Goodwin, J. C.
Gorman, J. A.
Griffith, J. F.
Hall, C. B.
Harper, H. D.
Harris, F. S.
Hawes, C. T.
Henderson, L. B.
Herndon, W. T.
Herring, H. C.
Hilliard, S. P.
Horton, H. V.
Horton, P. E.
Hunter, E. L.
Hunter, T. M.
Jacobs, J. M.
James, D. L
Jeter, I. P.
Jones, R. H.
Judd, J. H.
Keerans, E. P.
King, M. D.
Kluttz, S. B.
Little, J. B.
Liverman, A. C.
Livingston, C. D.
Lynch, William
McCracken, F. W.
McCracken, J. T.
Matthews, J. E.
Moose, J. K.
Morrow, R. M.
Osborne, J. C.
Osborne, J. R.
Parker, J. M.
Patterson, G. B.
Perry, E. A.
Pitts, H. C.
Ramsey, J. F.
Ramsey, R. L.
Ramsey, W. B.
Reagan, C. W.
Reagan, J. D.
Reid, J. G.
Reid, L. G.
Richardson, E. E.
Ritey, J. M.
Rominger, C. A.
Ross, T. T.
Rowe, W. W.
Sadler, C. D.
Sinclair, J. A.
Smathers, B. F.
Smithwick, D. T.
Snell, H.
Spurgeon, J. S.
Thompson, C. A.
Tucker, E. J.
Turner, Chas. R.
Turner, V. E.
Watkins, J. C.
Wheeler, J. H.
White, J. H.
White, L.
Whitehead, C. A.
Whitsett, G. W.
Wright, E. K.
Wyche, J. E.